

Oct 11, Wednesday. Cold as November to
the 1 p.m. of last week very rainy, Virginia
river up to about its August level.
No more claims this year. Rec'd card
from Abell, a while ago, and sent a card
in return, asking how to send him some,
He replied "by freight" rather laconically.
Finally, I washed up a lot of shells
for him. would pack tonight, but
must wait 'till package has a
small barrel. Also got a letter
from J. H. H. in, better than the

6-11-12

1000

11

Probably L. p. 21, no. 1 and Janet
some 21, very fine a 9.25
which is very large (a) 10

21. Its character is

very fine and very fine fine

very fine very fine very fine

very fine very fine very fine

very fine very fine very fine

very fine very fine very fine

very fine very fine very fine

very fine very fine very fine

very fine very fine very fine

very fine very fine very fine

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Oct 14, '82. 2 - 1/2

Scale: 1/4" = 1' 1/2"

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1/4" = 1' 1/2"

Oct (Belt Monday) Evg. --- 1st. by
I put up with Ash's lot.

9 up Ash's L. 6

13

a day out from home; I have with
me a small box of tools.

25 - Monday (Nov. 25)

1

After filling the tub I got
in and stood up
there! Then I got in
another layer.

Put back in down to
the bottom of the
tub.

... ..
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... ..

to be part away out -

The Hymn is almost to
be found in the same place

to be found in the same place

to be found in the same place

to be found in the same place

to be found in the same place

to be found in the same place

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to be found in the same place

(Feb. 29, 1891) ^{Monday} ¹⁸⁹¹ Cash writing
 He made no return on the many
 courts of this week. Tuesday noon
 Ed. Brown - "Pioneer". His (and
 Hart's) successor is a young thing from
 Colorado, - dark, slender, - Will Brown.
 He talks rather rough, like Hart.
 Is no premium at all, can't even

Hard, let alone "making ready" forms.
Harrish used a sheet of "Linen"
this week. I read the "Southern

Directory" a book Wednesday,

Curiously enough I had
perch Cassino a "K" lost track of
\$12. without even missing
\$2. of

it. He sent it back, Friday

209, "Hully" + I set up a lot
of "Linen" & "Linen", Corroborate

it last night + made it up.

Will work it tomorrow. I am not

guess. Friday night it is not

sent it to make George get it

can far more favorably impressed

with that. I had in "Circular"

Today. I have little to write

at address on 45 envelopes for H.D.

and. Foreign. (About 4 o'clock I
started out for a little walk,
wearing my straw "Panama" hat,
went up to that Brazil. Linnæa
locality on "Tour du Chemin" road, I
didn't find much, as it was
cold, so started back across that
pasture west of road. There were
a lot of girls (+ young ladies) playing
"croquet" on the grass.
I joined them after while +
had some fruit games, as they
were "Crazy", some were quite pretty.

Sent letters to Rev. about
Wednesday, I believe. Also
Linnæa + fossil Succ. etc.
Also letter to Rev. to look for Linnæa. You owe me 3 sp.)

Monday, — Today Willis, where I've
been getting my Linnæa, moved away.
I "run" my list of Linnæa this eve.
after supper. Brown run the engine
for me, + wouldn't take the beer
for it (!!!!!!) In exception to all


program I've ever seen. Walter is
"hashlinger" at the house, now.
(The Walter & Sons down in the country, men),

After running the list, I asked Tom
what the bill was ^{as a country, girls}. He said about
50¢! The paper was coarse tinted
book paper, which, at 1¢ a sheet, out-
ling say 2¢ to a sheet, could cost about
10¢. The work was all done by Shilly,
and myself, after working hours. But
out the paper. I looked it up at noon,
so there was no other expense to offer
except power of life. The most work
work reduces this to a minimum.
John is as good as dead, as he has
changed from "sunny" to dark
all the slams & used up all his
power on them, the other

John is as good as dead, as he has
changed from "sunny" to dark
all the slams & used up all his
power on them, the other

Oct 30th Tuesday 2009 - Aunt S.
- I made 200. Left this morn for
Charlton. Pa. I paid John 50¢
for that stock (list) I 25.¢ for those
statements I got a long time ago.
I have a "r" to let that office
office will never pay a cent. I'd.

I'll get even with that
company yet. I cut off
those. I'm supposed to die.

I may want to bring me
something soon.


For (AT) Sh. - There is a
(1 good way to keep track of
length of river is to see

where the South St. of Vassar
app. is in comparison to those three
yellow ones in Munro's collection.
Just app. same as how it was.

Later: made out cabinet no. for (Libby) & object
unlabeled —

100 100

Tracy, Red Tracy, as
app. Tracy's Tracy's Tracy's
as Tracy's Tracy's Tracy's

Tracy's Tracy's Tracy's
Tracy's Tracy's Tracy's

[Faint handwritten notes, mostly illegible due to fading.]

July 1st - 1880

Left for the ...

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1922 rare

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March 7, Sat. I send you three of my circulars
Today - "Lenny" brings the three boxes.

(1) F. R. Lamson, Sedalia, Mo.

He wants the species marked on list no. 1.
and offers "Poly. nigra, Poly. hexagona, morosa, dactyloides, scabra,
pruni, jacksoni, Stey. latronum, Mes. roemerii, etc."

(2) A. C. Quirkley, Du Bois, Ill (Washington Co.), He wants
species on list no. 2. + offers, U. pressus, fasciatus, radiatus,
complanata, Ane. fuscicornis, Salomonica, Meng. catenata, Ane.
intertexta, Ammota parva, Luvata zebra, Hy. Elevation, + 2 southern
Aeneas.

(3) J. B. Wagon, Rockford, Ill,
Desiderata, list no. 3.
ex. he ought to pay out.
Offer list + 10 to which he
Thurilla parvula, puerella, Mesopoda mutabilis
+ Marine moll.

Have a new "diary" now, - the
business press office. Have seen
my right today for a while, and if
I get many letters will be much
relieved for a while now.

(1) 8/12/2014 Sunday, 12th Dec. today

(2) 11/12/2014 Monday, 11th Dec.
1st day of the 4th

(3) 12/12/2014 Tuesday, 12th Dec.
2nd day of the 4th

(4) 13/12/2014 Wednesday, 13th Dec.
3rd day of the 4th

(5) 14/12/2014 Thursday, 14th Dec.
4th day of the 4th

(6) 15/12/2014 Friday, 15th Dec.
5th day of the 4th

(7) 16/12/2014 Saturday, 16th Dec.
6th day of the 4th

(8) 17/12/2014 Sunday, 17th Dec.
7th day of the 4th

(9) 18/12/2014 Monday, 18th Dec.
8th day of the 4th

(10) 19/12/2014 Tuesday, 19th Dec.
9th day of the 4th

(11) 20/12/2014 Wednesday, 20th Dec.
10th day of the 4th

23. 10. 18

(11.5)

17

20. 10. 18

12

[Faint, illegible handwriting throughout the page, possibly bleed-through from the reverse side. Some faint words like "from" and "the" are visible.]

James [unclear] [unclear] [unclear] [unclear]

July 1st 1880 [unclear] [unclear] [unclear]

1000 [unclear] [unclear] [unclear] [unclear]
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Sept 10
[unclear]

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[unclear] [unclear] [unclear] [unclear]

1891
The night
of the 1st of
January 1891
x x x
all
"

Shell dorsal small, flat; sides ... bluish ...
with ...

...
A small ...

...
... rounded above and ...
... discoidal below.

These two genera are certainly very close, but it is
difficult to distinguish them.

... since seen a species of ...
... tell the genus at sight ...
... and ...

... difficult ...
...
... of ...

...
...
...

Thursday

Received letter from Mr. [unclear] and
[unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
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[unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
his card, but will now, soon as I hear from
[unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]
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Handwritten signature or name

[unclear]

[unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear] [unclear]

Handwritten notes on a page, likely a ledger or journal. The text is written in cursive and includes various numbers and names. The page is numbered 6247 in the bottom left corner.

1. [illegible] 2. [illegible] 3. [illegible] 4. [illegible] 5. [illegible] 6. [illegible] 7. [illegible] 8. [illegible] 9. [illegible] 10. [illegible] 11. [illegible] 12. [illegible] 13. [illegible] 14. [illegible] 15. [illegible] 16. [illegible] 17. [illegible] 18. [illegible] 19. [illegible] 20. [illegible] 21. [illegible] 22. [illegible] 23. [illegible] 24. [illegible] 25. [illegible] 26. [illegible] 27. [illegible] 28. [illegible] 29. [illegible] 30. [illegible] 31. [illegible] 32. [illegible] 33. [illegible] 34. [illegible] 35. [illegible] 36. [illegible] 37. [illegible] 38. [illegible] 39. [illegible] 40. [illegible] 41. [illegible] 42. [illegible] 43. [illegible] 44. [illegible] 45. [illegible] 46. [illegible] 47. [illegible] 48. [illegible] 49. [illegible] 50. [illegible] 51. [illegible] 52. [illegible] 53. [illegible] 54. [illegible] 55. [illegible] 56. [illegible] 57. [illegible] 58. [illegible] 59. [illegible] 60. [illegible] 61. [illegible] 62. [illegible] 63. [illegible] 64. [illegible] 65. [illegible] 66. [illegible] 67. [illegible] 68. [illegible] 69. [illegible] 70. [illegible] 71. [illegible] 72. [illegible] 73. [illegible] 74. [illegible] 75. [illegible] 76. [illegible] 77. [illegible] 78. [illegible] 79. [illegible] 80. [illegible] 81. [illegible] 82. [illegible] 83. [illegible] 84. [illegible] 85. [illegible] 86. [illegible] 87. [illegible] 88. [illegible] 89. [illegible] 90. [illegible] 91. [illegible] 92. [illegible] 93. [illegible] 94. [illegible] 95. [illegible] 96. [illegible] 97. [illegible] 98. [illegible] 99. [illegible] 100. [illegible]

6247

Imp: $\cos \theta = 0$, check $\theta = \frac{\pi}{2}$

62 1 1720 6

The Deposits of the Light - at 1 in

1. 100 ft. water. 35 ft. above. There is a lot of water
 at the top of the water.

These figures are a good deal

Monday, Dec 11, 1900. - very fine day
 The day was very bright and the
 sun was shining. I did not get in
 a very good hour of work, but I
 did a little better than I had supposed
 could have been done.

- 565 11 fine Roslyn, Long Island.
 566 11 fine Lebanon Springs, N.Y.
 567 11 fine - fraterna (15) "
 568 11 fine - fraterna (15) "
 569 11 fine - fraterna (15) "
 570 11 fine - fraterna (15) "
 571 11 fine - fraterna (15) "
 572 11 fine - fraterna (15) "
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 599 11 fine - fraterna (15) "
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Alas get shell from Huntington
Apr. 1894 of charges interest

582.

Unio complanatus, Sol. Henderson Co., N.Y. - (4)

583 " *radiatus*, Lam. Otrigo Co., N.Y. (4)

584 " *pressus*, Lea. Kents Creek, Winemog Co., N.Y.

585 *Unodonta frumosa*, Lea. "

586 " *colymba*, Lea. "

587 *Unio intertexta*, Say. Ponds near Henderson Co. N.Y. (8)

588 *Trig. el. tumbea*. Kishwaukee river. N.Y. (2)

589 *Trig. livescens*, Ulke. Kishwaukee river, N.Y. (15)

590 *Unio luteus*, L. Cedar River, N.Y. (3)

9.

(2)

about 8 or 10 species to my coll. & 2 more from 1894

(1894)

Wednesday, Dec. 18, 1894. New York

to my coll. from 1894. (1894)

to my coll. from 1894. (1894)

to my coll. from 1894. (1894)

to my coll. from 1894. (1894)

5.2 Y-axis - minutes, (17) Test long test

(9) per *Supra, supra* (15)

9th December 1923 at 15.40 (14)

9. *2. p. = p. 112, 113*

90. *Uromyces* - *Uromyces*, 2 con (3)

19

9

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 10

1880

601 - 100, 100 (7)

60.

[Faint handwritten notes at the bottom of the page]

605

31

100

2000

109

669

Wednesday Aug 10th 1854

Thought of what presents I should

Mr. H. send him 20 species about of mail, and

ask him to write him a long letter, to

this time. I have been for a long time by that day now.

To write it day, however: I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

in the morning, and I have been for a long time

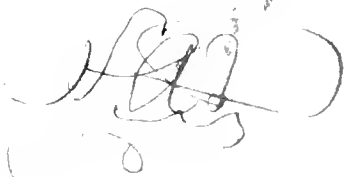
in the morning, and I have been for a long time

in the morning, and I have been for a long time

In form this shell seems rather like *Pl. steinheimensis* as figured in Ann. Nat., June, 1882, by Hyatt, but is flatter and different in spiculation, &c. If not belonging to *Planorbis*, as restricted now, to exclude *Helisoma* &c., it must form a genus intermediate between this and *Gyraulus*.



This is a poor figure, looking more like *Patula perspectiva*.



Wednesday, December 28, 1882. This morn Brown starts his Baking with a fine bit of "Local" page daily. It was all matter — no plate or cuts, at all, Otto brought it up in bucket.

Bohman came up today. Has had no couch. luck, except find of single *Urosalpinx*.

I must write to G.M. before Sunday, 'tis a shame to wait so long.

Pa arrived last night after I had gone to bed.



New Year Day!

"My" happy new year "was" spent at office this
noon, dille yesterday & most all the time
now. This aft. got my photo taken at
Kendrick. After all Herbert's promises of the
young woman to me, he got a Des Moines young
woman to take it. It got in this
morning. Haven't talked with him
yet, but I can't pan out worse than
Boorou. Am going to write to Bill now,
Heard from Hudson today.

Jan 15 1931 Wednesday. Yesterday I wrote to Bill
& mailed letter today. Yesterday rec'd box from Hudson
It was a pretty good one. Here are contents --
in with his names.

- 610 ~~701~~ *Urosalpinx fragilis*, Langf. (Woodruff's Pond, Pullsburg N. Y.)
611 ~~702~~ *Urosalpinx integer*, L. Ray (7)
612 ~~703~~ *Gyrulus albus*, Müll. (15) Woodruff's Pond, Pullsburg N. Y.
613 ~~704~~ *Urosalpinx pallida*, Hall, (140+)
614 ~~705~~ *Zonites nitidus*, Müll. (22) Pullsburg.
615 ~~706~~ *Bulimus hydrae*, Linn. (20+)
616 ~~707~~ *Vilum* (Linn.) G. S. (22)
617 ~~708~~ *Macrocyclus concolor* G. S. (13)

- 118
~~719~~ *Limnophya catascopium*, Say. (2) Lake Champlain, at Chazy, N.Y.
 (1 Banded var.)
 619
~~716~~ " (304) Lake Champlain, at Plattsburgh.
 620
~~717~~ *Sphaerium rosaceum*, Poine, (lot) "
 621
~~718~~ *Goniobasis liracensis*, Lurke, (17) Lake Champlain, Grand Isle.
 622
~~719~~ *Limnæa stagnalis*, ("Lim") (9) Plattsburgh.
 623
~~720~~ *Limnophya palustris*, Müll. (50 or so) "

In all 14 species, about 6 or 7 new to me.
 The shells are well collected mostly, but *Anodonta* broken
 apart. *L. fragilis* is a thin fragile green shell, very
 beautiful, shining, beautifully marked beaks, something like this)
 Some of the smaller specimens of "*L. stagnalis*" are almost
 indistinguishable from my *capitata* in form.

The *Bulimus* are smaller and more obtusate than
 Spirit Lake shells.

L. catascopium, a fine species! seems to have five revolving lines.

Valimida smaller than *U. alb.*

"*Melanthe integer*" is almost certainly *M. decisa*, Say.

Macroychia not so very small, after all.

Anacoda pulchra, *Sph. rosaceum* don't differ very much from allies.

T. albus seems to be a good species.

Sunday Evg, Jan. 7. 1883. In writing up coll. nos. I find little

but mistakes. I now transfer a species as follows

561 *Urosalpinx rediviva*, Say, (5) Cedar Key, Fla, now March to no. 624.

Jan. 7, 1883, Sunday eve. - Nothing of special note has occurred since my last writing.

Rec'd a postal from Abby inquiring about my answer delay in answering his Christmas letter. Today and Saturday I worked nearly all the time on my old cylinder - Victor (our new man) don't know anything about it. I am by no means at work on it yet but hope to be before long. I have had a

lot of job forms, bills &c. but no work forms as yet - will get one of "Animals of Iowa" tomorrow, I guess. May all good spirits help me!

Friday have been as busy! went over to the city this morning with Emma and Willie. It is a pity that away it clanked. I have statues, vases, columns, and corbels &c., &c. I've been correcting mistakes in my cabinet nos. this eve. & have got things somewhat straightened out.

My last number is ~~564~~ + 624

I was at the following figures of success, Helicinus,

Lunapophyes etc., in Call and McGee's paper on the
 Löss of Badkies, La. They are pretty good, but
 I am bound to beat them in (as McGee's work
 I hope to hear from him very soon.)
 The proof of my photo was not at all satisfactory, as
 I shall sit again soon.

Ucnarea.

Apex nearly central. Adults nearly smooth.

Young more or less ribbed, rather sharply conical, apex
 slightly posterior, sharp. (acute), feet with 25 blunt ribs,
 or none.

fig. 1

pelta, Esch.

fig. 3.

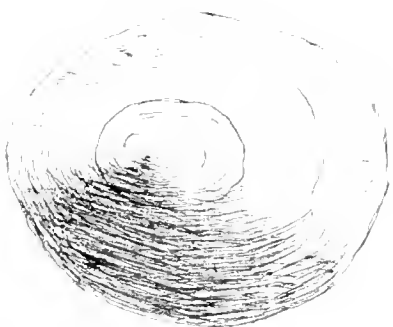


fig. 2.

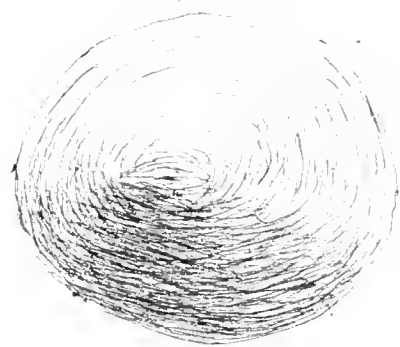
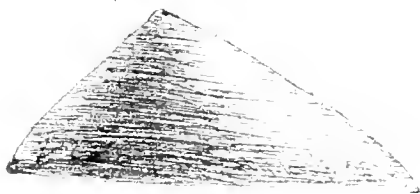


fig. 4



Ucnarea pelta, Esch.

(From a Santa Cruz, Cal. specimen
 in my coll.)

no. 605.

Ucnarea patina, Esch.

(From a Santa Cruz specimen.)

no. 606

fig. 5.

Young striate, or smooth: low obtuse-conical. - - - patina, Esch.

There seems very little difference between these two species. pelta is said to
 be smoother, more conical, with apex or apex. The margin of pelta when not
 somewhat crenulate has a narrow rim of brown internally. patina has wider rim, + when
 fine, is more or less dark all over interior. pelta 2-3 mm.

Apex decidedly posterior,

Shell with strong ribs, - spectrum and persona, Ed.

Shell small, black, striate, - asmi Kidd

fig. 5



Acmata versana, Esch.

Monte Long, Cal.

fig. 6.

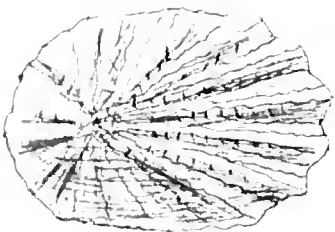


fig. 6a.



Acmata, g. trau, Nutt.

San Gabriel - '603

fig. 6b.



Acmata asmi, Kidd

San Gabriel, Cal.

'602

These two large species of Acmata are quite distinct, though allied, judging

from specimens in my coll. The interiors are very distinct, persona having a large dark oval central area, white around this, and dark rim more or less broken with white at

spectrum has a curious hand-shaped impression, the lights are very plain & plain. Interior dull, not enamelled as in A. persona. A. persona has about 10 or 12 ribs (radiating) usually not nodulous. Apex acute, smooth, brown. A person has usually more ribs - 14-20 or 25 - but only in intermediate ones between them. These ribs are constant, strong, sharply sculptured, strongly crenulating in margins, nodulous above, superior not plane as in persona.

fig. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Jan 9. Tuesday evg. in

X

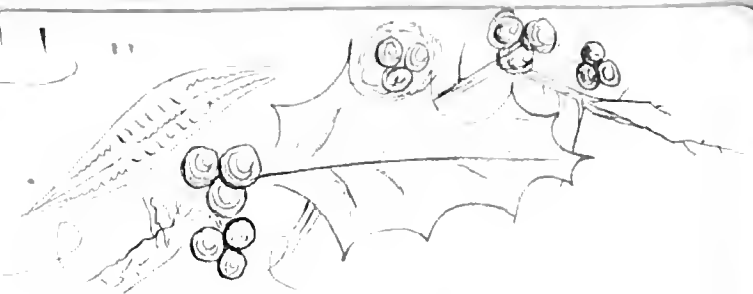


fig. 7.



Olivella biplicata, Dy.



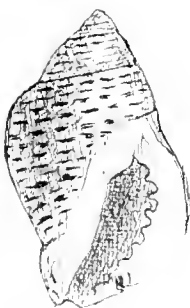
fig. 8.



O. biplicata, Dy. slender "var."

Santa Cruz, Cal.
No. 598

fig. 9.



Monacera

capitata, Tour.

Santa Cruz, Cal.

No. 596.

Olivella in char. - Shell olivaceous; Columella with very heavy deposit of enamel above, 2 fold: at base. Suture canaliculate. base of shell with a spiral deposit of enamel externally. shell polished.

These two figures of Olivella were made in about 10 minutes. The first (and best) one was done in 3 or 4 min. or less.

This is a beautiful little shell, — a favorite with me,



Monacera capitata, Tour. fine shell.

I have but three specimens; the teeth in aperture number 5, 6 — upper one small, and 7, — upper one quite small, but distinct. The teeth seem to be renewed with each successive revolution, and are not absorbed, or perhaps partially so in evolution. Peristomes slightly crenulate.

Tomorrow I made ready and worked up my first rock form on cylinder. — Did fair success —

M. equatum differs principally in being smaller, ^{having} more obvious revolving ridges, carinate ribs, thinner, &c., &c. The count of teeth in 10 shells gives 6, in most specimens with a very slight thickening, or 7. 3 of the first 10 toothless. The shells are rounded, white.

Jan. 10, 1889. Wednesday eve

1111

Fig. 15.



Peripura saxicola Val.

Peripura is quite a plain species. deep brown with more or less sub-obsolete revolving sulcae. Lip slightly crenulate at times. body whorl very large. Some of my specimens (from Santa Cruz) have a small 5, 6, or 7 pointed conical Balanus-like creature adhering to them.

(something like this)  cccccc

I feel very anxious about ~~Alfred~~
Hovarth heard from him yet since writing my last.

I finished up Hove's "Annals"
for me today, and got ready a form
for the "Maunax".

These profiles are fearful!
Each one is worse than the
last.

H.A.P.



all

Jan 11, 1883, in Tuesday Evng.

Today at noon rec'd letter + box from Asa.

He writes a jolly letter but don't help me out on the matter of cost of plates. He sent *Melanthis* n.s., *Gillia* ?? n.s., and some more large rather flat *Panorhis* like those in center of the *Panorhis* plate I made.

Joe sent also some fine *Unio*idae from Macon river and a *Unio spinosus* Lea. He also returned the *Anodonta* I sent him last week (oss). They are *Anodonta ferrassaciana* Lea (♂ and ♀) and "Am. wardiana Lea No doubt." "Am. pavonia, Lea"

This leaves me more muddled than before on this shell (the "thick *Anodonta*")

re *Unio spinosus* is a daisy!

~~~~~

- 625, *Hyalina elloria*, Müll. (3) Cork, Ireland. (1841)  
626 *Gompharia papillosa*, Cuth (4) Fla  
627 *Pistula nubilosa*, Beck (5) St. Croix, W. Indies.  
628 *Unio variabilis*, Ad (4) Manchester Jamaica  
629 *capitata* Mont. (4) Jersey Island.  
630 *Unio pecunda*, Ad (3) Long Key, Jamaica

- 631 *Chondropoma dentatum*, Say (4) Fla.,  
 632 *Cylindrella agrestis*, Oshad, (3) Jamaica.  
 633 " *foecilis* Wood, (2) "  
 634 *Cluselia rugosa*, Drap. 10. Cork.  
 635 *Xerophila micetorum*, Müll (3) strange var. Wales?  
 636 *Cylindrella elegans*, Müll (4) France,  
 637 " *variabilis* Drap. (4) Cork.  
 638 *Indora megachila*, Beck. (3) Jamaica  
 639 " *antacragense*, (2) St Croix, W. Ind.  
 640 " (1) Lake Soc, Fla.  
 641 *Indora verrucosa* St. (1) Baen Ayre, N. Indies.  
 642 *Xerophila micetorum*, Müll (3) Masolan, France,  
 643 *Gon. interrupta*, Haid, (5) N. Carolina  
 644 *Strophia nicana*, Plin (3) S. Fla.  
 645 *Oyria curvata*, Lam, (1) Upper Amazon.  
 646 " *subviridis*, Plin (1) " "  
 647 *Unia spinosus*, Lea, (1)

Jan. 12, 1889 - Friday evg. - - Wrote a postal  
 to W. M. this noon.

Of the shells recd. from A.W. yesterday, seven species are  
Cyclophoridae. 4 Genera, 7 species. Most from West Indies, In this  
 connection would be Cyclostoma elegans, from France, a fine species  
 with concentric spiculation of  $2\frac{1}{2}$  whls, circular aperture and well  
 rounded whls, with fine revolving striae. Shell minute, with  $4\frac{1}{2}$   
 whls, light brown or yellowish, fig. Does not show aperture  
 as circular as it really is. Lip sharp, simple,

fig. 11.



Cyclostoma elegans, Müll.

France.

(636)

(as to curvature) deep  
 obtuse.

Xerophila in Shell Depressed, umbilicate, <sup>5 or 6 whorled.</sup> lightly rounded. aperture  
 subcircular, oblique, indented by body whorl. Peristome slightly  
 expanded, ends approaching, connected by light callosities or callus.  
 Suture impressed. Body whorl slightly descending at aperture, periphery  
 rounded. Shell whitish with usually broken & revolving bands.



fig. 12



X. ericetorum, Müll. var.

Wales.



fig. 13.



X. ericetorum, Müll.

Manolan, France.

Something like these are two species marked simply "H."

These may be related to Euparypha, however.

fig. 14



"H." caperata, Montfort.

Island Jersey.

I feel almost sure that the shells figured  
 in figs. 14, belong to Euparypha. They are  
 carinate, rather depressed-globose, narrowly umbilicate,  
 $4\frac{1}{2}$  whorled, whole slightly descending at aperture. Aperture somewhat oblique, obliquely  
 semilunar, Peristome simple thickened within.

"I once" first thing, I guess. If I can  
get a stool on the cylinder here, as I shall if  
work on it till spring, I don't care a cent for  
the key piece. I can afford to be independent.  
I haven't been outside of the yard ~~this~~  
till day today. Yesterday evg., coming home

stopped at Bohm's. We consulted about  
cost of ~~the~~ plates. He thinks from \$3.00 on a  
pair compensation, & I quite agree with him.  
Saturday at about eleven a.m., I got off, &  
went to Plunk's (via barber shop) to sit again  
for photo. I will see proof Tuesday (15th)

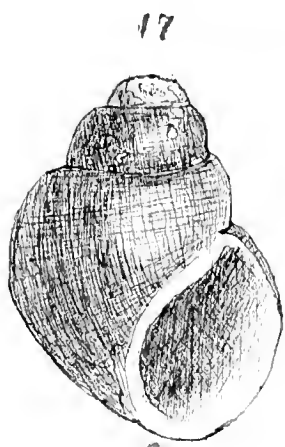
5 Tuesday evg. Jan. 16, 1883

(After writing above entry I wrote a card to ~~Plunk~~, an imperfect  
copy of which is in back of this book, saying that plates were worth  
about \$2.50 or \$3.00 a piece.)

We had a "bad time" so for this work on  
press-work. I was g.d. off today last form of "animal" & the cover. <sup>we</sup>  
have a form of "animal" over ready in press.

Today is a rainy day. - snowing, - I rec'd \$7.00 last  
sat. evg., for first time - have in no extra time, either, or  
only a little extra.





A deep reddish-purplish species. Its characters are very distinct. --- dark colored interior and very minute & numerous spiral lines, whole shouldered, <sup>apex eroded.</sup> A fine shell, not very different from U. decisa in form, but very distinct in the revolving striae &c. &c.

These are & infernally hard shells to draw,

h. c. c.

Jan. 17, '83. m (Wednesday eve. m.)



These figs. of Canisuloma decisa, say, from Lake Champlain (N.H.) are certainly better than last night's figs. of ab. no. spec. The shells are not 20!

not expanded. margins not much approaching. Shell spirally banded,  
fig. 15.



variabilis, Hap.

Co. Ireland.

This shell reminds one of such shells as "Doreasia" berlandieriana and griseola.

They probably belong to Fenticicola or a closely allied genus. I have no species of the latter genus, so don't

know certainly where to place this shell.

Shell globose-depressed-conical, slightly wrinkled, rather narrowly umbilicate, 5 whorled. Aperture very rotundly semi-lunar, oblique. Peristome thickened internally. simple, not expanded. Margins somewhat approaching. ~~Aperture~~ <sup>very</sup> slightly delected at aperture, not carinate, well rounded, spirally banded. This shell also has a slight resemblance

to Euparypha. In all, 83 specimens, 23 species.

fig. 16.



Vanilla nigra, Hap.

Co. Ireland.

No. 640, "Lake Dora, Hap." is a lot of those Planorbis figured for him on my last plate, which I've called "Physa scalaris, Hap."

~~Aperture greatly thickened outside oral or circular~~

\* Peristome greatly thickened outside, continuous.

Shell rimate or umbilicate; aperture circular, ~~para~~ Adamsiella.

Shell imperforate, aperture oral. Cistula.

Peristome expanded or retracted?

To me, Chondopoma, etc., and 7  
C.B. 10 p. m. (und.)

" 11 Jan 14. 1883 - Sunday evg. m.

Today have overhauled all my Iowa City Unionidae -- that is my own series -- They had become very damp in the cellar-way, & the ligaments had relaxed in many of the species -- such as amboudes, occidens, &c., &c. -- These gaping shells I tied mostly, and have placed all behind stove in our "sitting room" (that is the middle room) I also looked over the shells which I had picked out for B. H. Hudson, 16 Kattoburg. I must send him a nice lot, for he will be useful to me in studies of the Unionidae. I wrote a card to him tonight.

Since I've been working on the cylinder press, I've felt more like work than I have since commenced this fall. I don't look forward to tomorrow as a weary desert, with only an oasis at noon & night, but with real pleasure -- I will have a form of "annuals of

were different from decisa. Both species have much the same form, are constantly truncate, have revolving microscopic lines, and shouldered whorls, but the nov. spec. has shorter spire, far more numerous and conspicuous revolving impressed lines, and is very different in color. In this respect it is much like what I have called C. integer, var. rufa, n. sp., from Cedar river, (see Aug, 1882, notes)

The specimens are rather more eroded than most integer decisa, - or, rather, more deeply and smoothly,  
 Aug. 18, 1883. - Thursday evening



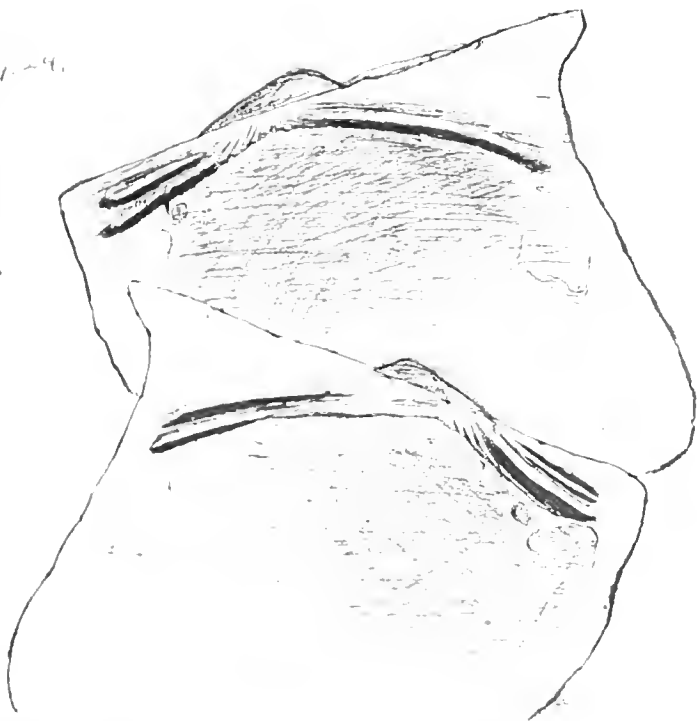
Hyria subtridid, Klein.

Upper Amazon.

No. 616

Hyria - char. - Shell subtrigonal, elongate, inequilateral, rather thick, narrow internally, covered with an olivaceous or brownish epidermis; hinge & margin perfectly straight; ligament external, flattened, narrow, not conspicuous. (winged posteriorly, and slightly so anteriorly.)

Anterior muscular impression rather deep, irregularly oval, with an accessory small side impression near it, toward the beaks; posterior impression larger, more indistinct, pear-shaped, - a little oval.



Upper Amazon.

No. 616.

Aug.

palatal line simple, cavity of valve rather deep, of beaks very shallow.

Nares somewhat invaginated anteriorly and on wings.

Anterior teeth double in right valve, very much compressed and elongated, <sup>1/3 length of hinge line,</sup> ~~and~~ outer one smaller, often divided longitudinally, or with smaller accessory teeth outside of it; not extending to beaks posteriorly, and with numerous small or minute rather rough striated ~~and~~ laterally compressed accessory teeth, radiating from beaks downward and anteriorly. In left valve anterior much the same, but with a small low compressed accessory tooth inside of principal one, and ~~several~~ outer tooth trifid (~~not in my specimen~~) or divided into several low teeth. Posterior tooth in right valve very large, elongate, slightly curved, single, compressed,  $\frac{1}{2}$  length of hinge margin. In left valve divided <sup>longitudinally,</sup> inner tooth longer. Otherwise the same.

W.A.B. 104 + 105

Jan. 19. 1883. Friday evening

Recd a letter from Walter H. Harrison this morn.

Upon superficial examination of the *Hypa* ~~antennae~~ I concluded that the cardinals were represented by those fine transverse striae on hinge near beaks, and supposed that the large anterior teeth were laterals. For this reason I did not apply any distinctive names to the teeth in above generic description except "anterior" and "posterior". I am now convinced that these teeth are true cardinals, but showing remarkably the generic of anterior lateral teeth, and of that type of hinge with minute cardinals, and lateral teeth both anteriorly and posteriorly. Viewed thus, these curious shells betray their very close relation

to (the subgenera of) Unio. The teeth, certainly are  
formed on precisely the same plan --- laterals  
divided in left valve, simple in right, compressed,  
lamellar; cardinals variously formed.

In the anterior muscular impression there is  
a character of perhaps greater importance, --- the  
accessory inner impression is above (or toward the beaks)  
instead of posterior and below as in Unio. The  
straight hinge ~~the~~ margin and narrow ligament  
are pretty good characters. Some of the char. in the  
description of this genus are subgeneric (or rather  
characterize ~~subgroups~~ of species) or specific. They are  
drawn from a single specimen, for I haven't broken  
my corrugate apart yet. If the genus is an  
extensive one like Unio, the description will apply  
to only a group, like Metaptora of unio. Like  
Metaptora these shells are winged. I must  
get Bohumil's Unio ingallsiana, (a fine winged species,  
with much the aspect of a Metaptora, --- white  
nacre) from India for study. Aspl in litt.  
says " + + + . Two species of Hyria from the  
Amazon, rare and beautiful shells as I think,  
though I do not know how they will strike  
you. I can attempt to substitute his Triguetra for  
Hyria is simply more cursedness. They are no relation

whatever, if his T. contorta, from China, (only in Peas  
 + Copes collections and in mine in America) is a true  
Triguetra."

Of course I can venture no  
 opinion on this matter, never having seen a  
Triguetra. But of its close relation to Unio  
 I am persuaded.

Fig. 25.



Myria currugata, Lam.

Upper Amazon. No. 645, J.M.P.

Fig. 26.



M. currugata, --- Dorsal view.

10 1/2 p.m., 1)

Jan: 20, 1883. Lat. 27.5 N. 111.5 W.

Uros spinosus, Lea.

Shell elongate, hinge and lower margins equally convex. Epidermis yellowish, thickly pitted, with wrinkles of growth, smooth. Shell obscurely truncated posteriorly, with an obtuse angle below posteriorly, and a series of 2 to 4 slender upright spines, extending some times obliquely downward and backward. Sides more transversely wrinkled above, smooth below.

Fig. 27.

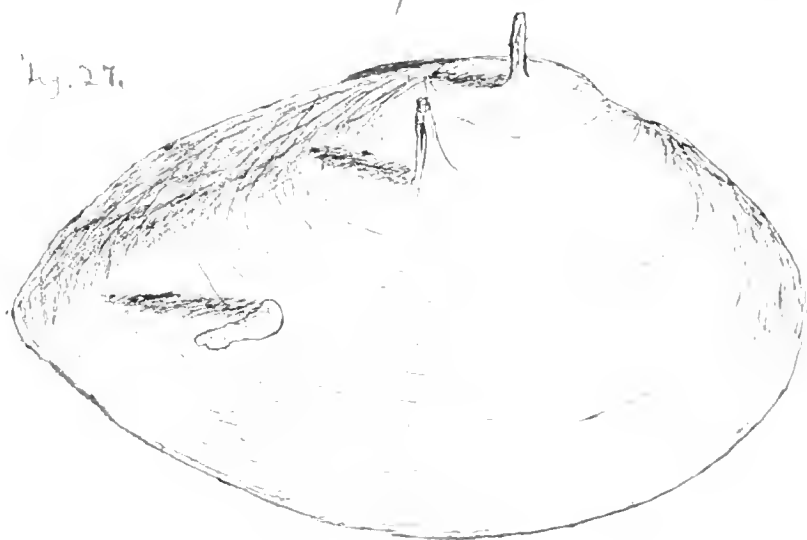


Fig. 28.



Uros spinosus, Lea.

Fig. 27.  
Uros spinosus, Lea.  
The shell is elongate,  
with a small spine  
protruding from the  
top. The surface is  
covered with fine  
wrinkles, and the  
hinge is slightly  
convex. The sides are  
transversely wrinkled  
above, and smooth  
below. The shell is  
obscurely truncated  
posteriorly, and has  
an obtuse angle below  
posteriorly. A series  
of 2 to 4 slender  
upright spines extend  
from the posterior  
margin, some of which  
may be obliquely  
downward and  
backward.

Fig. 28.



11.11.1909) on 22, Monday, 1909.

I'm washing out

the Cedar river and Iowa river. Compelmas  
I noticed many specimens with the outer  
part of body without subtranslucent, in both lots. Some Iowa  
shells are slightly reddish, but these are  
rarer than in our river lot. The apex  
is always perlick in both lots. They vary much  
in elongation. The whorls are less shouldered  
than in the Cedar, from Lake Champlain  
I notice a subtle difference in color, they are  
more of the pinkish or reddish color, the white box

[illegible]

thin, just above center of parietal wall, that the color and wrinkles of growth of antepenultimate whorl are plainly seen through it. There is a strong white callus just at posterior angle of aperture, extending slightly down on columella. Below (the columella proper) is strong white, rather wide, extending downward, covering <sup>the</sup> basal part of whorls internally, and above ~~and~~ covering the outside of antepenultimate whorl, spirally extending into the shell. The ~~aperture~~ <sup>columella</sup> is thus somewhat as in *Pithasia*.

The aperture is slightly oblique. Rimstone black-edged, produced more or less forward ~~at lower anterior side~~ outside below, and retracted at base of columella. This style of curvature is very characteristic.

The Cedar river shells are many of them covered with a blackish incrustation, very difficult to remove, while Iowa river shells are easy to clean, having a clearest epichorus, and, when at all incrustated, the deposit is reddish and easily removed. The Cedar river lot, (from which all my obs. tonight are drawn), numbers about 115. Nearly all are nearly <sup>full</sup> grown, one is in shell, and about a dozen are perceptibly tinged or deeply colored with red.

Jan. 25, 1883. Thursday eve.

Tuesday, eve. at Jones, (Monday) and Wednesday, at City Hall clock reception & Holson's accounts for no record since Monday eve. I haven't yet heard from (A. J.!) I'm getting anxious about

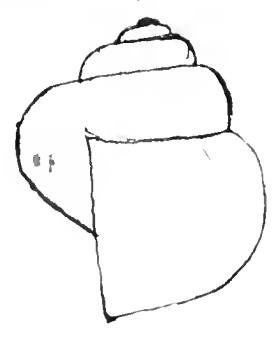
him, you bet!

Hickley's "Viv. intertexta, Say" (no 587) from Winnebago Co., Ill.; seem to me to be a form of Viv. contectoides, W.B. (= contecta, W.B.).

Fig. 32



Fig. 33



Shell very globose, light, thin, (almost fragile) dark colored,  $4\frac{1}{2}$  whorled, umbilicated, (equally so in very young) whorls finely ornamented with lines, growth, all the growth lines are more or less distinct, in certain positions of growth. Peristome whole or slightly expanded at apex. Large, nearly  $\frac{3}{4}$  inch with shell, aperture oval-circular, slightly flattened by body when open. Peristome small, horizontal simple, short, root, slightly oblique.

sinuous, continuous, Revolving lines very fine not numerous nor conspicuous. several very obscure darker revolving bands. Peristome dark iridescent brown.

These shells have an essentially different aspect from the heavy Melanthosus. One would hardly refer them to the same sub-family.

Friday, Jan. 26, 1883 - in evg.

Rec'd a card and 2 species of

*Calliostoma* from Loma, P. I. Itecoz, Tux-  
tepec.

648. *Calliostoma callianassa*, M. & S., P. I. Itecoz, Cal., (6.)

649. *Calliostoma canaliculatum*, M. & S. " " (one) (2)

Loma is stingy, but no doubt about it!

Today in the bindery I found in St. Nicholas  
a lot of addresses of young collectors (especially  
assumed). I wrote to W. H. C. White, Itecoz,  
Tuxtepec, Robert Kenyon, Utopia, N. Y. etc. etc.

W. H. C. White, Itecoz, Tuxtepec, Cal.

W. H. C. White, Itecoz, Tuxtepec, Cal.

was this address (did it write) {  
was W. Sprague,  
19. O'Brien was Chicago,  
it was in parts of world. }  
W. H. C. White

Jan. 28, 1883. Sunday evg. in evg.

This morn. Bohm came up. We had a  
good old fashioned pow-wow. He's off.  
I packed up a box for Jackson. Put  
up more but good shells, and good lots,

Here is what I sent.

*M. fragrans*, 6  
*rustulans*, 30 or +  
*mutans*, 5-  
*cinctus*, 25  
*ascopus*, 8  
*rigorus*, 20  
 " (*puknare*) 5-  
*solidus*, 30 +  
*ellipticus*, 1  
*subignivus*, 10  
*elegans*, 25 +  
*tuberculatus*, 8.  
*rectus*, 4 or 5  
*anodontoides*, 18.  
*ligamentinus*, 13  
 " (*pink*) 3  
*luteolus*, 4  
*spatulatus*, 9  
*occidens*, 8  
*parvus*, 12  
*striatus*, 20.  
*Mary* *rayosa*, 6.

(also about 100 (or +)  
*Helicina oculta*, and  
 50 *Campeloma niger*  
 (or *subsolidus*) from  
 Iowa river.

In all, 278 specimens

|     |                                                                                                                                                                                                                                                 |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30  | } <i>Unionidae</i> ,<br>and 22 species<br>and more.<br>About 150 specimens<br>of <i>Helicina</i> + <i>Campeloma</i><br>in common<br>150 Unionid<br>brought me up<br>some <i>Bulinna</i><br><i>virgata</i> , from<br>some north La.<br>locality. |
| 5   |                                                                                                                                                                                                                                                 |
| 25  |                                                                                                                                                                                                                                                 |
| 8   |                                                                                                                                                                                                                                                 |
| 1   |                                                                                                                                                                                                                                                 |
| 5   |                                                                                                                                                                                                                                                 |
| 30  |                                                                                                                                                                                                                                                 |
| 10  |                                                                                                                                                                                                                                                 |
| 25  |                                                                                                                                                                                                                                                 |
| 5   |                                                                                                                                                                                                                                                 |
| 5   |                                                                                                                                                                                                                                                 |
| 10  |                                                                                                                                                                                                                                                 |
| 5   |                                                                                                                                                                                                                                                 |
| 2   |                                                                                                                                                                                                                                                 |
| 4   |                                                                                                                                                                                                                                                 |
| 9   |                                                                                                                                                                                                                                                 |
| 5   |                                                                                                                                                                                                                                                 |
| 2   |                                                                                                                                                                                                                                                 |
| 6   |                                                                                                                                                                                                                                                 |
| 275 |                                                                                                                                                                                                                                                 |

650. *Bulinna megasoma*, Say, 12. *Smith*.

~~640~~

9, p. 1. Have just finished writing the base  
 other to. Had an (ought to) thing  
 or something.

(VSN)  
 LA (LAP)  
 (LAP) haven't heard from ASW. yet!

Wednesday, Jan 31, 1883.

For the last 2 days and mornings

I've had charge of Passroom, & consequently  
had lots of work. The morning daily takes  
the cake for bad jobs. John D. just  
monday last, but hasn't yet left  
town. Perhaps he will start a job  
office here. Fate is awfully busy with  
Holstein Ward-book. &c., &c.

I haven't heard from Asst. yet!

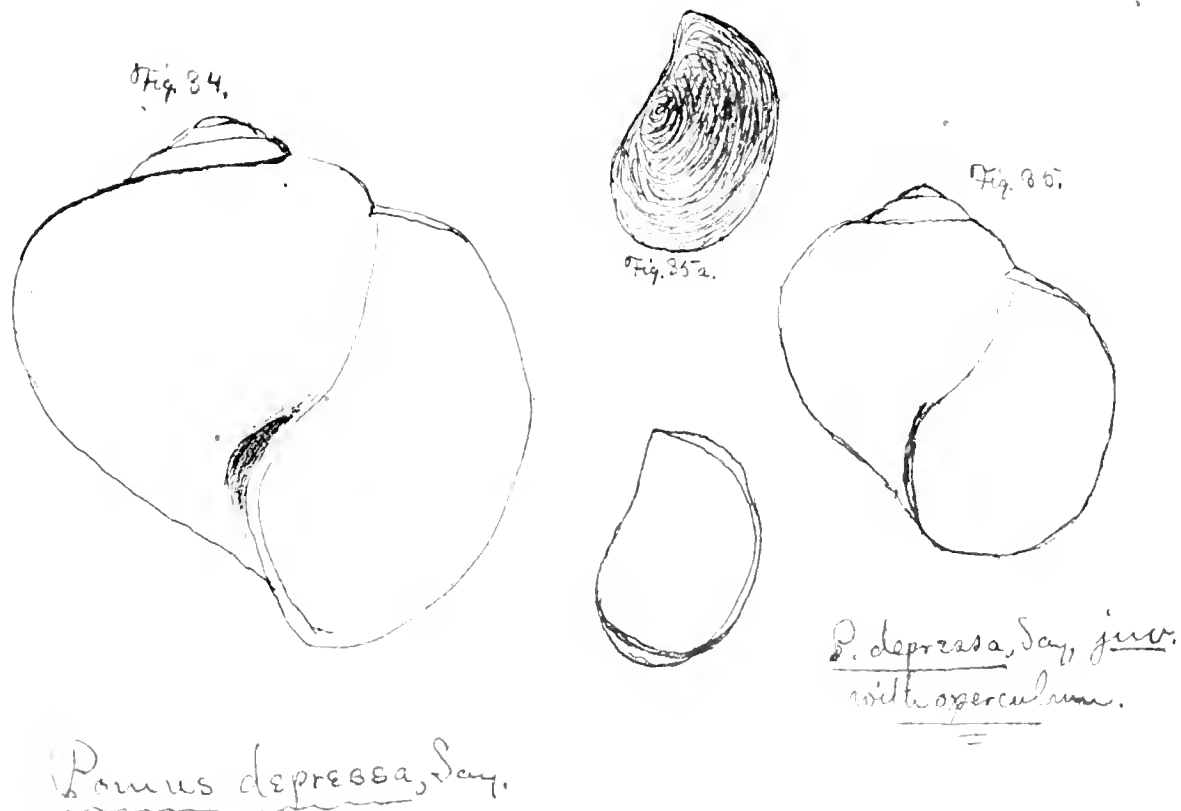
Jan.

February 4, 1883

Sunday after noon

Today I have written a card to  
J. R. Sampson, Seattle, Wyo., who wrote me  
about 20. about Friday. I also sent  
about 75 Pomatiopsis lapidaria, 80 + Sorobrynia  
depressa, 100 + Lim. caperata, and 25 Porcella.

I have had no word from ~~Agassiz~~ yet, — nor shells  
 either. He has not taken my box for Hudson's depôt  
 yet. Yesterday morn, as I was cleaning up book press for  
 a form of "Holstein etc" Mr. Tate came down with a press-  
 man who he introduced to me as Mr. Morris, from Des Moines.  
 From what I see of his work on Handbook and "Notes-Report-"  
 I hardly think it will be a success, I helped him out  
 on the last. Received \$12.00 for last week's work —



Shell large, subglobose, thin, light,  $4\frac{1}{2}$  whorls,  
 umbilicated when adult, with numerous ~~convolving~~ vandy;  
 Lip expanded, almost reflected at base of columella,  
 continuous; aperture suboval, or subsemicircu-  
 lar, arcuated on inner posterior portion, well rounded  
 anteriorly; Operculum the same in outline, concave on  
 inner margin, above. concentrically striated, the polar  
 point very near columellar margin, a little above center,  
 slightly concave, very thin, ~~smooth~~ smooth internally.

Paristome nearly all in a plane, the lower columellar portion  
a little retracted. Whorls convex, the body very large  
and globose,  $> \frac{3}{4}$  entire length of shell, somewhat  
shouldered, tapering somewhat below. Spire very small,  
short, apex obtuse, perfect. Columella somewhat thickened  
with yellowish callus. Parietal wall with a light covering  
of same, thin & transparent. No revolving lines,  
transverse wrinkles of growth more or less obvious.  
Colors, green at brown. Interior deep rich brown,  
shining. The columella is imperforate until the  
shell is more than half grown. The "genera"  
of this family adopted by Messrs H. & A. Ad. in "Genera  
& recent Moll" seem to me poorly characterized.

H. A. Peabody

Sept 5, 1883

Today sent card to Alm, and rec'd from  
Champion his Sotalia list. (Look dinner at Long's today)

Rather cool. Frank, Hates assistant, says its 95° below.

We separated some fossil Lupae tonight, and  
some lucinae. They seem to be oralis, lugginsi, and  
the old bayou? I must look this matter up.

There seem to be three species of fossil Papae, —  
unuscorum, armifera & contracta? The Löss Eu.  
multilobata has quite a resemblance to some sp.  
of Leucochroa.

Alm

Alm H. A. P.

H. A. P.

J. B.

Iowa



Feb. 18, 1883. — Saturday Evg. —

I've worked off book- or job forms nearly every evg. this week, and Cooper's "Pioneers" has taken a great deal of my unoccupied time, so that accounts for my neglect of my record here. — Today I received a box and letter from Lampson. He is a trump! Good fellow, writes jolly, free and easy, and is entertaining. More than all he sends good shells! I must make up a good lot for him in return.

Here is what Lampson sends — numbered as he has them

- 651 *Luc. groenlandica*, Lea. (5) Ft. Worth, Tex.
- 652 *Luc. concordialis*, GOS. (5) Galveston "
- 653 *Luc. roemeri*, Pfr. (15) Ft. Worth, Tex.
- 654 *Luc. exolata*, var. minor, (5) Eureka Springs, Ark.
- 655 *Luc. diversa*, GOS. (5) Ft. Scott, Kansas.
- 656 *Luc. albolineata*, var. *alleni*, GOS. (3) Eureka Springs, Ark.
- 657 *Bulinulus emarginatus*, Pfr. (10) Ft. Worth, Tex.
- 658 *Tachea hortensis*, Müll. (10) England.
- 659. — larva — (15) Eureka Springs.

- 660 *Stula strogia*, Gld. (3) Munton, Cal.  
 661 *Sten. labiosa*, Gld. (7) Eureka Spr. Ark.  
 662 *Sten. bicolor*, Say (5) Denison, Tex.  
 663 *Poly. Texaniana*, Mord. (15) Ft. Worth, Tex.  
 664 " *dampsoni*, Gld. (10) Eureka Spr.  
 665 " *jacksoni* Bld. (5) " "  
 666 " *montana*, Mord. (6) Ft. Worth, Tex.  
 667 " *torquelliana*, Lea (5) Denison, Tex.  
 668 *Tric. fallax*, Mord. (5) Eureka Spr. Ark.  
 669 *Vit. pfrifferi*, Newc. (5) Oway Co. Cal.  
 (9550 ft. high).  
 670 *Tric. cubica*, Mord. (3) Sedalia.  
 671 " *fallidula*, Mord. (?) (20) White river, Carroll Co. Ark.  
 672 " *plebeia*, Mord. (5) Roaring R. Spring, Barry Co., Mo.  
 673 *Phenocera subulm.*, Mord. (40) White river, Ark.  
 674 *Limnæa caprata*, Say (20) Ft. Worth, Tex.  
 675 *Sph. aurum*, Prine, (5) " Pierce City, Mo.  
 676 *Pisid. additum*, Mord. (?) (30) Eureka Springs Ark.  
 677 *Physa gyrina*, Say (30) " " "  
 678 " " " (5) Sedalia, Mo.  
 679 *Anaxilus tardus*, Say (10) " " "  
 680 " " " (30) Eureka Spr., Ark.  
 681 *Limnæa orbiculata*, Lea, Sedalia, Mo.

Total, } 31 species, 372 specimens,

minus 12

19 species new to me.

Feb. 11, 1888

At this time I am going on 13. I think  
late in season. I've got him some  
Polygona etc. He is going to set up  
up a lot of his northern things for  
myself & Sanderson. I've sent  
up a nice lot of sh. for him  
this aft. here is the lot.

Lac. lignum, 9. La Cy.

Lun. palustris 12, (No. 307)

Zumaria, 10 per.

Physa gyrina 20 from Catfish; 23 Caprata pond, & 2

from the same place, etc.

Pl. hiolus 15 Caprata pond,

M. truncatus, 10, per.

Hydrilla, 5 ft.

Campyloneura 10.

Pl. subulna, 30.

Utr. pallida 5 from Lake Champlain

" " 25 " " Sp. 10 ft.

" " 25.

*Succinea* *lucida*, 50,

*Succinea*, 1. juv.

About 300 specimens, so far, with  
B.S. lot of the corbiculidae yet to sort  
up.

Monday, Feb. 11, '3.

Tachea

Fig. 36.



Fig. 37.



Fig. 38.



Shell heliciform, globose, rather  
turkinate, apex obtuse, 5 whorls,  
columnella narrowly perforated,  
perforation covered in adult by reflection  
of peristome, lightly wrinkled,  
banded or not, aperture quite  
oblique, broadly lunate, ~~thin~~  
peristome expanded <sup>with a</sup> very much  
thickened <sup>rim</sup> within, extremities  
not approaching, columellar margin  
thickened and straightened within,  
somewhat as in *Lae* *Aearus*, a  
light callus on parietal  
wall. Body-whole very large  
globose,  $> \frac{3}{4}$  length of shell,

Tachea hortensis, Mill.

England.

deflected at apex. The columellar portion of the  
peristome reminds one instantly of *Aearus*. It is  
appressed to base of shell precisely as in that genus.  
The periphery is well rounded. The adult shells

seem at first sight to have the lip reflected, but this is only seeming, and results from the thick rim of enamel deposited just within peristome. The shells seem to me to have a distinct European facies, more like Acaevas than any other genus I'm acquainted with. Indeed the relation here is very close, I believe. Juv. have columella like a Eupanypha, somewhat.

An index of heliceiform genera figured and described in 1882 and '83.

(Exclusive of the Vitrineae.)

- 1 Xerophila. — Jan. 11. 1883. (Vol. II.)
- 2 Tachea. — Feb 11, 1883. (Vol. II.)
- 3 Patula. — Caricatiformis. July 8, 1882. (Vol. I.)
- 4 (H. rareguttata, Maisey, type) July 5, 1882 (Vol. I)  
figured & described.
- 5 Pteropoda. — (P. marginalis, Pfr. fig. & des.) July 4, '82. (Vol. I)
- 6 Leucochoa. — July 3. 1882. (Vol. I.)
- 7 (H. lais, et extensa, Pfr.) July 3. 1882 (Vol. I)  
fig. & described.
- 8 Eupanypha. — July 3. '82, (Vol. I)
- 9 (H. arenosa, Bing. fig. et des.) July 3. '82. (Vol. I)
- 10 Acaeva. — June 30. 1882. (Vol. I.)

11.

(*H. capitata*, Emert. fig. et des.) Jan 11, 1883, (Vol III)  
probably = *Eupanypha*.

12

(*H. variabilis*, Drap. fig. et des.) Jan 11, 1883. (Vol II)  
probably = *Inticicola*.

Thus about 11 or 12 Genera have been  
at various times investigated & figured, mostly  
by several figures. I add here the other  
genera I'm familiar with from my own  
specimens, — *Stenotrema*, *Uresdon*, *Polygyra*,  
*Tridopsis*, "*Dorcasia*", "*Aglaia*", *Aristata*, *Gyplostoma*,  
*Tallonia*, *Strobila*, *Helicodiscus*, —

(Type "*H. megaregoni*", Cox.) This gives me 23 or  
24 genera of heliiform "*Helicea*", about 1/2  
of them figured.

Feb 12, Tuesday Evg. 

Rec'd from Bohmial S. these —

682 *Bulimnaea megasoma* Say, (11) Forest City, La.

683 *Seg. armenica* — Hardin Co, La.

684 *Anc. rivalans* Say Cedar Rapids, Ia.

- 685 *Ph. sutulera* Lea. Cedar Rapids Ia  
 686 *L. humilis*, Say. " " "  
 687 *Lac. higginsi*, ~~Bl.~~ Hamilton Co., Ia.  
 688 *F. subaplerica*, Lin.  
 689 *Mes. multineata*, Say, (21) Elora, Ia -  
 690. *Bulmus hypporum*, Lin. <sup>See lot from Wm. H. Co. Ia. of</sup>  
<sup>old coll. L. D. W. = old no.</sup>

Finished putting up Sam's box lot.  
 I wrote a letter to him.

Feb 18, 1883, Sunday Evg. Just a week  
 since last entry. I sent off that package  
 to Sangsman, with letter. Haven't heard  
 from ASW yet! Must write to him again.  
 Last Sunday was very warm, and since  
 have had several days of rain and mist.  
 River rose up just over bank on  
 this side. On Friday (I believe) about  
 11 a.m. it changed to quite cold, and  
 has frozen since, until today, now milder  
 and melting some. but nearly all

of the deep snow that has covered  
the ground since Dec. is left. (We  
have had hardly a warm day till last Sunday  
since Dec. 6), (Rec'd) \$10.00 Sat. evg, \$9.00 work before)  
(We've had no plate nor telegraph since Friday)

The Ohio river has been extremely high -  
65 ft - have really been anxious about  
G.W. M. write to him tonight I guess  
H.P. HAP HAPing lab. day

Tuesday Evg. - Feb 27, 1883

Will last work had a "funny" job  
with "Holstein" etc, Sat. at Sun. was just  
"Krank", and am not quite over it yet

Today had another pressman - from Chicago  
a "dandy" named Jewett or Jewell, good  
workman, I guess. Morris got fired  
last Sat. evg.  
who next?

Rec'd \$2.00  
Sat. evg.



Feb. 27, '83 --- Got a card from Lampson  
last week, and ~~a~~ letter from AGU, Saturday. - The  
latter was.

March 1, 1883. Beautiful day! Heard first ~~in~~ of  
the season singing this morning, and also, perhaps  
*Lilia* and wittering of purple martins. Yesterday  
wrote to AGU and mailed letter.

"H. mcgregoryi, Cox.

One of the most  
curious heliciform  
shells. Allied to none  
of the genera I have  
represented in my coll.

Fig. 39.



Fig. 40.



Fig. 41.



Shell heliciform, flattened, discoidal, whorls 10, equally visible  
above and below, supra-peripherally carinated, shining  
and rounded below, slightly wrinkled above, <sup>+ flattened descending at aperture.</sup> Aperture subquadrate,  
flattened above, rounded below, very oblique. Peristome  
expanded, thickened. Shell nearly plane above, saucer=  
shaped below.

The peristome is very much like *Macrocypris* in  
structure. The upper outside, angulate, produced  
forward. A queer and interesting shell.  
Quite light in texture, - yellowish horn-colored.

Fig. 42.

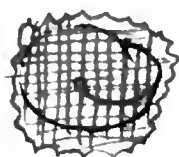
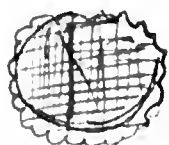
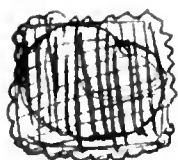
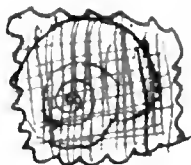


Fig. 43.



# Dorcasia

Gen. char. — Shell heliceiform, globose, narrowly perforate, white with translucent bands. (spiral) Whorls 5, rather rapidly increasing, with transverse wrinkles of growth, very slightly descending to aperture, Aperture broadly lunate, slightly oblique, peristome slightly expanded, very much thickened within, ~~as a~~ <sup>as a</sup> ~~recessed~~ <sup>recessed</sup>, but approaching, subreflexed at columellar

extremity, umbilical region slightly indented, a slight ~~furrow~~ <sup>recess</sup> constitution behind lip.

Synonym. Build these shells have a slight resemblance to Euphylla. They agree in slight obliquity of aperture, general shape of shell & aperture, umbilical characters, and rapidly increasing whorls. The texture of shell is very different. Libby



Friday, March 2, 1889. Fine day again. — a notable event this winter, Mora Furdus. River rose nearly to foot of hill on this side since yesterday morning. Ice still in, not much broken up. ell I haven't heard from anybody for a week!

Fig. 44

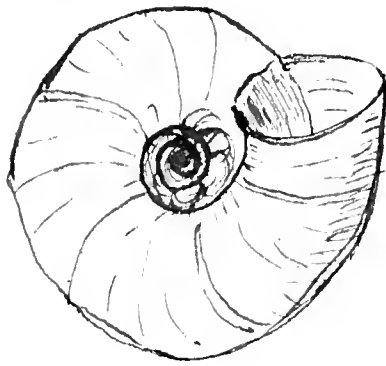


Fig. 45

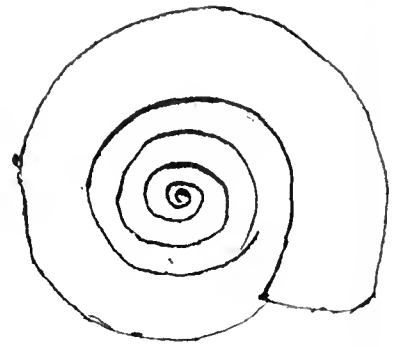
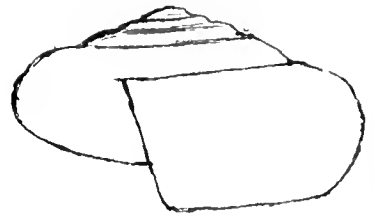


Fig. 46



Fig. 47



Glyptostoma newberryanum, W.B.B.

Coll. H.A.P. - No. 110.

S. California,  
(ell)

Glyptostoma - char. —  
Shell umbilicated,  
orbicularly flattened,  
obliquely wrinkled,  
rather thin, deep brown,  
whorls 5, rather rapidly  
increasing, not at all  
deflexed at aperture,  
well rounded,  
Aperture roundly  
lunate, slightly oblique,  
somewhat wider than  
high, (fig. defective here)  
Peristome thin, sharp,  
simple, (ell) <sup>lower</sup> extremities  
approaching slightly,

A light parietal callus, nearly transparent, or whitish, <sup>marked</sup> with  
very numerous microscopic spiral lines, a <sup>single</sup> row on  
all volutions.

Binney's figure of G. newberryanum is much more  
depressed than my specimen.

A. A. H. A. P.  
ell

Sunday, March 4, 1888.

(11:30 a.m.) Fine outside! Sialias yesterday and today, also Turdus.  
Very little snow left. Regular spring weather,  
since 1<sup>st</sup> inst. Recd \$10.00 last night.

The Aglaias et Ariontas in my coll. seem to  
fall into three principal groups, of about  
equal value. They may be briefly characterized  
as follows: —

**I.** Shell globose, conic; elevated; axis ~~imperforate~~ or sub-  
imperforate; umbilicus sometimes closed by reflection  
of peristoma.

Arionta, Leach.

(Type, A. californiensis, Lea.)

**II.** Shell globose, depressed, umbilicate.

— — — — Aglaia-arionta.

(Type, A. inornata, Pfr. and A. parata, Pfr.)

**III.** Shell as in II, but with a tendency to carination, spine regularly  
conoid. Umbilicate. Body whorl more depressed.

(Type A. fidelis, et impunctata, G.S.) Aglaia, Albers.

The first and second divisions differ very decidedly,  
judging from my material, in these points —  
General shape, the 1<sup>st</sup> being much more globose. Umbilical  
characters. I always having a very narrowly perforated axis.

sometimes covered by lip, while II has the axis decidedly umbilicate, even when umbilicus is concealed by reflection of peristome, a matter of only slight importance. On the other hand I can find very few tangible points of difference between "Aglaio-orienta" and Aglaia, although they may perhaps always be distinguished by general aspect, and it is on this ground that I make the separation. All my conclusions are drawn from an examination of these species, —

- 1 Arionta californiensis, Lea,
- 2 " Kelletti, Fbs
- 3 " nickliniana, Lea.
- 4 Aglaio-orienta mormonum, Pfr.
- 5 " dupetitrounsi, Desh.
- 6 " indiculata, Bin.
- 7 " exarata, Pfr.
- 8 " arrosa, Gld.
- 9 " townsendiana, Lea.
- 10 Aglaia fidelis, Gray.
- 11 " infumata, Gld.

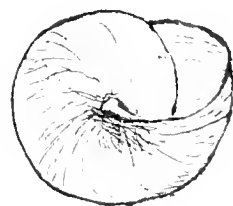
11 species, distributed in the three genera thus —

Arionta, — 3  
Aglaio-orienta 6  
Aglaia — 2

Fig. 48.



(49.)



(50)



(51)

Arionta californiensis, Lea.

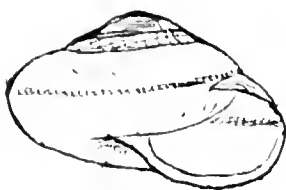
A. nickliniana, Lea, is a thicker shell, with less globose body whorl, smaller aperture, and more oblique peristome more expanded & thicker, one more whorl, &c.

The only other species of this group that I have, A. kelletti, is so different that I give it a separate illustration.

(52)



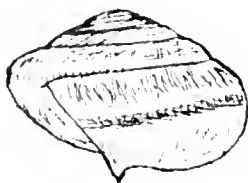
(55)



(53)



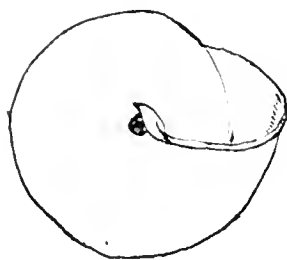
(56)



(54)



(57)

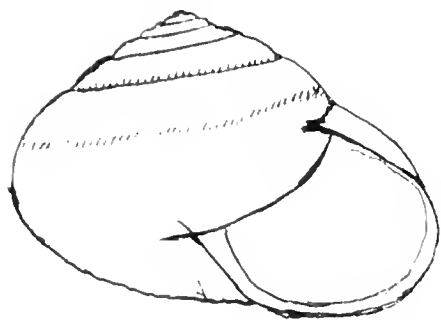


Anonta kelletti, Forbes.

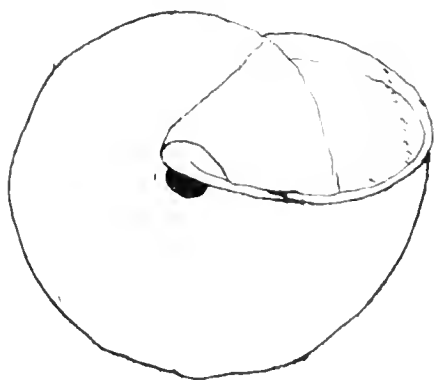
Aglaiononta monomma, For.

more or less confluent  
in numerous rows

(58)



(59)



Aglaiononta arrosa, Glt.

Anonta kelletti is a very thick, heavy shell, compared with its allies californiana & nicklmanni. Its aperture is very oblique, pendulous briefly but broadly reflexed and appressed over umbilical region, rendered continuous by a heavy (for this group) deposit of enamel on parietal wall. Shell mottled & clouded with brown, with a cloudy supra-peripheral revolving band. Cloudy flecks of white or cream color are

volving fascia, whorls 5, deeply deflexed at aperture.

Aglaiononta monomma, For.

selected as the type of the genus, is much the same shape as ves. profunda, Say. It has  $5\frac{1}{2}$  whorls, slightly deflexed at aperture, Epidermis quite smooth, polished, regularly & finely wrinkled, without special induration, as in most anontas. It is

rich brown in color, with a colorless fascia bordering the suprasphenical band on either side.

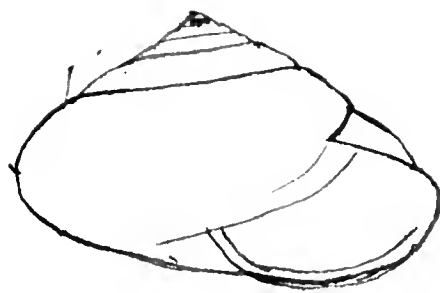
A. dupetithoussii, Dech. differs in being 6 whorled, more elevated and conic, darker color, and higher, narrower aperture. Heavier texture, a closely related shell.

A. tuniculata, is quite a different thing. Globose, light, narrower band with much fainter colorless fascia bordering it. Surface covered with minute indentations, etc.

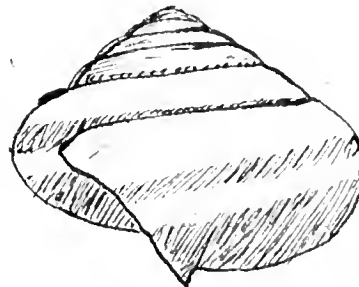
A. exarata, Pfr. is the extreme of the peculiar indentation seen in western shells. It shows little trace of regular oblique wrinkles or striae, but is covered with a network of cream white wrinkles on a nearly colorless ground.

The rather wide fascia is deep brown, whorls 6, somewhat deflexed at aperture. Lip much more expanded than in most species, slightly more than dupetithoussii. This is perhaps the key to the

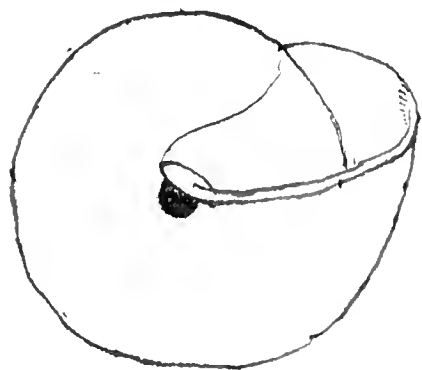
(60)



(61)



(62)



Aglaia fidelis, Gray.

(63)



Aglaia infumata, Dech.

curiously developed lip of next species.

Aglaio-arioluta Townsendiana, Lea. At first sight one would certainly think this shell a Mesodon. I did so at first, (as witness June 24, '82, Pt. I) G.W. Tryon, in his Terr. Moll. considers it as such. But when studied with such shells as exarata, for one sees the resemblance. Both have much the same color, — yellowish brown, like the Mesodon etc., but in exarata the color is obscured by the very numerous whitish wrinkles, which are fewer in Townsendiana, which has more regular striation.

The shape of aperture is much the same, but Townsendiana's is flattened by the internal thickening at base. The peristome of the latter is more broadly reflected, and flattened, whiter, & heavier. Between these two shells lies just the difference of an expanded and an reflected peristome, and Arioluta shows how the Helicodonta peristome type of lip originated.

---

In one other respect A. Townsendiana has the aspect of Mesodon, — that is, absence of the supra-peripheral fascis, as characteristic of the Ariolutas. — L.H.B.



Aglaia fidelis, Gray, is a beautiful shell, with nothing of the sculpture of arivata of the exarata type. It is more like the polished surface of dupelithouarsii etc., but even more glossy. It appears black unless held up to the light, when it is a lovely wine color. The supra-peripheral fascia is same color, with a white opaque fascia of nearly equal width below it. Above, the whole is light colored. Spire conic. Lip narrowly curved over — or reflected basally.

A. infumata is similar, unicolorous, dark, periphery creniated. It differs in epidermis, also.

The other species are — { Aglaia hillebrandi, Guss.

Arionta intercis, W.B.

" reducta, W.B.

" steiriana, Guss.

Aglaio-arionta apressana, Guss.

~~steiriana~~, Guss.

ramantosa, Guss.

corpetoni, Guss.

seguincola, J.S. Corp.

franki, Guss.

Aglaio-arionta diabolus, Corp.

" rupinella, Guss.

" gabri, Guss.

Doubtful whether all these are real Aglaio-ariontas. I judge from W.B.'s figs & descriptions.

March 7, '88. Wednesday Evg. 9. p.m. clear

Haven't heard from Alm nor Lampson yet! — nor anyone else, this week.

Wrote to W.H. Harrison the other day.

In looking over the '88 vol. of Am. Nat., in bindery, I found in "Record for Recent Nat. for 1878" — (W.H. Dall) — that the H. circumcarinata — was described in Nov., 1879, by Stearns, as "H. var. circumcarinata", Stearns, and, from Dall's remarks, he seems to think it allied closely to mormonum, Ph.!!  
I can't see it. (See July 8, 1882, Vol. I)

March 8, 1888.

Thursday Evg. clear

A lovely day! — The river

is higher now, — up to foot of hills on the other side. There's an ice jam opposite the observatory, but the river is clear as far as I can see up. It is perfectly placid surface

were reflected the great Maples and Birches  
wonderfully clearly, ~~at~~ this evening.  
Alice will start for Chicago tomorrow  
morning. — I forgot to record that  
in the place quoted from yesterday, it is  
recorded that W.G.B. erected a "gen. nov."  
for *Nilina lathrasina*, Lewis, i.e. *Nitrogonites*

My *Triodopsis* are ~~not~~ <sup>so small</sup> a fragment of the  
whole number of species of the genus, that  
I can't give any exhaustive survey of  
it, as in *Arizata*, etc.

I have these:

1. *Triod. obstricta*, Say
2. " *oppressa*, Say
3. " *triaculata*, Say
4. " *fulvax*, Say
5. " *loricata*, Hal
6. " *capri*, Hal

These fall naturally into  
three groups, — 1st that of  
*T. obstricta* and *oppressa*, 2nd of  
*T. triaculata*, *fulvax* and *capri*,  
and 3rd of *loricata*.

None of these have been figured nor rem-  
arked on except *T. triaculata*, Say in  
(Old Series, vol. 2.)

March 11<sup>th</sup>, 1883, - Sunday, 8:30 p.m.

The last week has been very variable as to weather, vacillating between January and June in temperature.

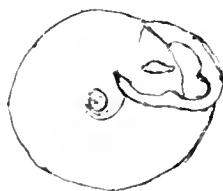
Today rather warm, windy. Have got my coll. a little straightened up. Haven't yet heard from AGW!

nor Sampson, nor Hudson. I got some of those square wedding stationery boxes (at office), and packed these clams nicely in cotton in them -





*Tricloricala*, Say.  
Cal. (139)



69



70



66



71

*Tricloricala*, Say.  
Civ. D. - (138)



67



74



75

*Tricloricala*, Say.  
Loc. mont. Texas. (140)



72



68

*Tricloricala*, Say.  
var. Ga. (134)



76

*Tricloricala*, Say. var.  
Barren Springs, Ark. - (663)



73

*Tricloricala*, Say.  
Tenn. - (141)

March 13, 1883.

Tuesday evg. —

Triodopsis, Raf.

The genus Triodopsis was founded by Rafinesque  
on specimens of Say's "Helix" tridentata, I L  
therefore is plain that the tridentata  
group must bear the name of Triodopsis,  
whatever ~~the~~ Tryon and others may name  
~~the rest~~ other sections of the genus.

Real Triodopsis are —

A. tridentata, decidedly umbilicate, margins of lip much  
approaching, shell moderate in size, unicolorous,  
Type — tridentata.

A.A. Shell small, ~~the~~ globose, narrowly umbilicate, 5 or  
whorled, last whorl deflected at aperture,  
aperture tridentate, teeth minute, an internal tubercle  
at base, near aperture, as in Stenotoma (?)

Type — lenticata.

AAA. Shell with umbilicus covered, or nearly so, by  
reflection of peristome at axis. — a lamellar  
basal tooth, with or without a tooth above,  
also, parietal tooth. Type, obstricta, appraera, &c.

d. It seems such Raf. made Triodopsis inflecta

the type of his "genus" Xolotrana. I can't  
see why Tryon refers the species of my  
group "AAA" to this genus, and the T. inflecta to  
"Isognostoma". Tryon includes also in  
Xolotrana the Mesodon with parietal tooth  
and lamellar basal tooth, such as elevata Volck,  
My material is too limited to review the  
genus, and attempt a revision of its classification  
now.

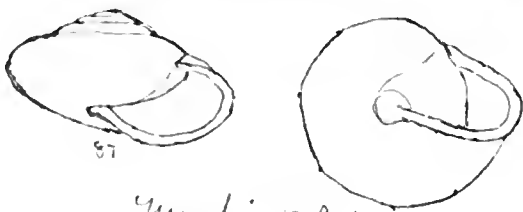
HA <sup>10:30</sup>  
10 p.m.  
over

March 14, 1883 - Wednesday.

10:30 + p.m. Have just finished Pl. II, Revisions, of Mesodon, Ref.  
23 figs., 11 species. The air was warm & fine today. Quite stormy? (potential)  
now. Ice all out of river since Sunday, and river within banks on this  
side. Pl. II, Revisions.







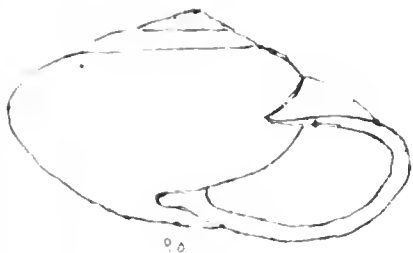
*Mes. divisa*, Gld. 88  
Ark. - 135.



*Mes. albolaris*, Say.  
Lebanon Springs, N.Y. - 506.



*Mes. albolaris*, Say.  
Cin., O. - 127.



*Mes. allenii*, Gld.  
Cincinnati, Ohio. 656.

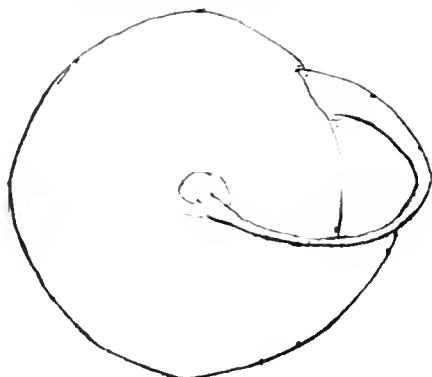


85



86

*M. exaltata*, Winn. var.  
Cincinnati, Ark. - 654.



82



83



*Mes. pumilio*, Gld.  
Cin., O. - 131.



90



91

*Mes. devia*, Gld.  
Oregon. - 136.



92



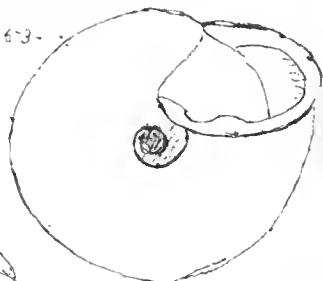
93

*Mes. eivratu*, Say.  
Cin., O. - 130.



94

*Mes. rosmari*, Pt. 95  
N. York, N.Y. - 653.

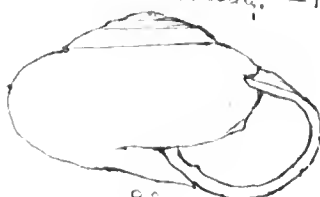


97



96

*Mes. praeputia*, Say.  
Dumali. - 11.



98



99

*Mes. sayi*, Winn.  
Ky. - 133.

March 16, 1883. Friday evg., 8 p.m.

The genus Mesodon seems to be divided into two groups of species, characterized as below -

I. Shell decidedly umbilicate, depressed-globose, aperture subcircular, or rotundly lunate, margins of peristome approaching, connected by a light columellar callus, sometimes armed with a small oblique paristomal tooth, a basal tubercular tooth on peristome.

Ulostoma.

Type --- Sayi, and profunda.

II. Shell with columella narrowly perforated, perforation covered by reflection of peristome, or open, aperture variously formed, with a lamellar basal tooth, or a basal thickening, or simple at base, columella with or without an oblique denticle, sometimes a slight tooth on peristome above.

Mesodon.

Type --- atholobris, &c.

The first section is small, containing only three species, I believe, - viz. profunda, Sayi, and chilhowensis. M. profunda has a much more oblique aperture than Sayi, with peristome and basal tooth far better developed.

The shell is heavier and more coarsely striate,  
and has no parietal tooth in profunda. My only  
specimen of chilhowensis is too poor for description.  
See figs. 96 to 99, Pl. III, Veronesis.

~~These~~ Mesodon as restricted on last page, is  
divisible into a large number of groups  
of approximately equal value, not very well  
characterized perhaps, but <sup>well</sup> enough for my  
purpose, until I can get the other  
species for study.

- (1) Shell rather large, globose, subimperforate, or imperforate,  
a thickening at base of aperture, with or without, parietal denticle,  
umbilical perforation minute.  
albolobus, albus, major, exolata, multilineata, (diversa, ??)
- (2) Shell moderate, very globose, subimperforate or imperforate,  
aperture very rotundly lunate, not toothed, no basal  
thickening to peristome, aperture rounded below.  
clausa, p. mitchelliana.
- (3) Shell <sup>globosely elevated</sup> imperforate; aperture with a lamellar tooth  
at base, with or without a parietal tooth,  
Spire more or less elevated, dome shaped.  
elevata, pennsylvanica.
- (4) Shell depressed-globose, imperforate or nearly so,  
with or without parietal tooth, no basal  
tooth.  
rostrum.

(5) Shell rather globose, columellar perforation covered partly by reflection of peristome, which is decidedly flattened or toothed at base; parietal wall toothed or not, shell dark colored, or lurid, weathered species,  
devia, columbiana.

The presence of a parietal tooth, or of umbilical fissure, upon which G.W. Tryon, in "Monog. Ter. Moll." founds his sections, it will be seen, is but a very slight feature in the groups above given, which are founded principally on the basal characters of aperture.

Species of each of the groups presented above are figured on my "Pl. II. New series," drawn a few days ago, I began on it at 8 and finished about 10.

Today Porston called at Office. He leaves for home tomorrow. Believe will strike a scheme with him. He collected those Bulinum at Forest City.

---

10.10.18  
G. C.

March 18, - 1883. - Sunday, evg.

Have at last got my own Unions  
packed up. They fill 5 boxes and  
and several boxes. Here is the list  
all coll. in 1882, of course. —

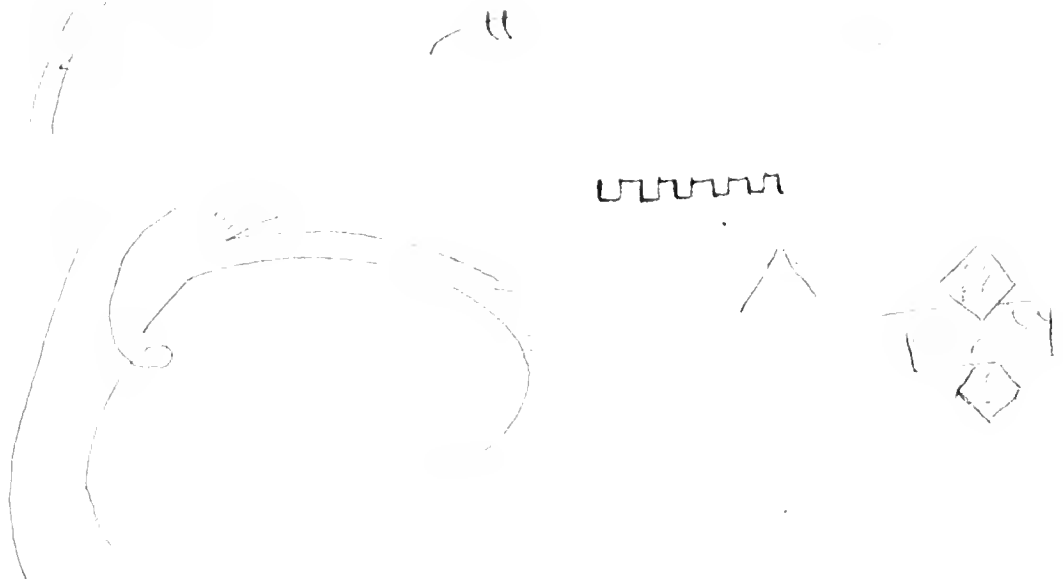
- 684 *Chrys. alatus*, Lea. var. *albitermaceus*. (2) Aug. 19, 1882.  
685 " " (Typical) (5 or 6.) see 1882.  
686 " *Laciniellus*, Lea. (11) part juv coll opp. our house, see Aug. 17,  
687 " *gracilis*, Bar. (6) all over, also a few juv. see Oct. 1.  
688 " *fragans*, Bur. (8) (& doz or so uncleaned) also 20 or so juv. all from Hoffman locality.  
689 " *Institula*, Lea. (20) & 30 or so juv. all over.  
690 " *antenniger*, Bur. (31) - mostly from Hoffman locality, with fragans etc.  
691 " *coccinellus*, Bar. (50?) part juv. see last sp. - also Sept. 17, 18, 22, &  
692 " *asopius*, Bur. (18) " " " " "  
693 " *Trigonius*, Bar. (15?) & lot of juv. " " " Not all over, not plenty.  
694 " " var. *coloratimacra*. (20?) " " " Not common  
695 " *Solidus*, Lea. " " (15?) " "  
696 " " (Typical) (20) & lot of juv. see *Trigonius*, no. 693.  
697 " *Stilpnis*, Bur. (25) mostly from *Laciniellus* locality.  
698 " *obscurus*, Lea. (2 or 4) - Aug. 19, 1882. - Hoffman locality.  
699 " *tuberculatus*, Bur. (10) - all over.  
700 " *rectus*, Lam. - (10) Hoffman locality, up above dam.  
701 " " var. *purpureo-nigrescens* see last  
702 " *ligamentarius*, Jan pink " " not common  
703 " " (white). common all over.  
704 " *annulatoideus*, Lea. (22)  
705 " *lunissimus*, Lea. (40 or so) mostly from Hoffman locality.  
706 " *luteolus*, Lam. (15) common with *ruficornis*. - Aug. 27, etc. not all over.  
707 " *spatulatus*, Lea. (25 or so)  
708 " *occidens*, Lea (lots. inc.)  
709 " " var. *pinkimacra*. (3), not common.  
710 " *picatus*, Lea. (30) all over.  
711 *Marg. complanata* Bar  
712 " *rugosa*, Bur. (5) Very common above dam. see *rectus*, not elsewhere.

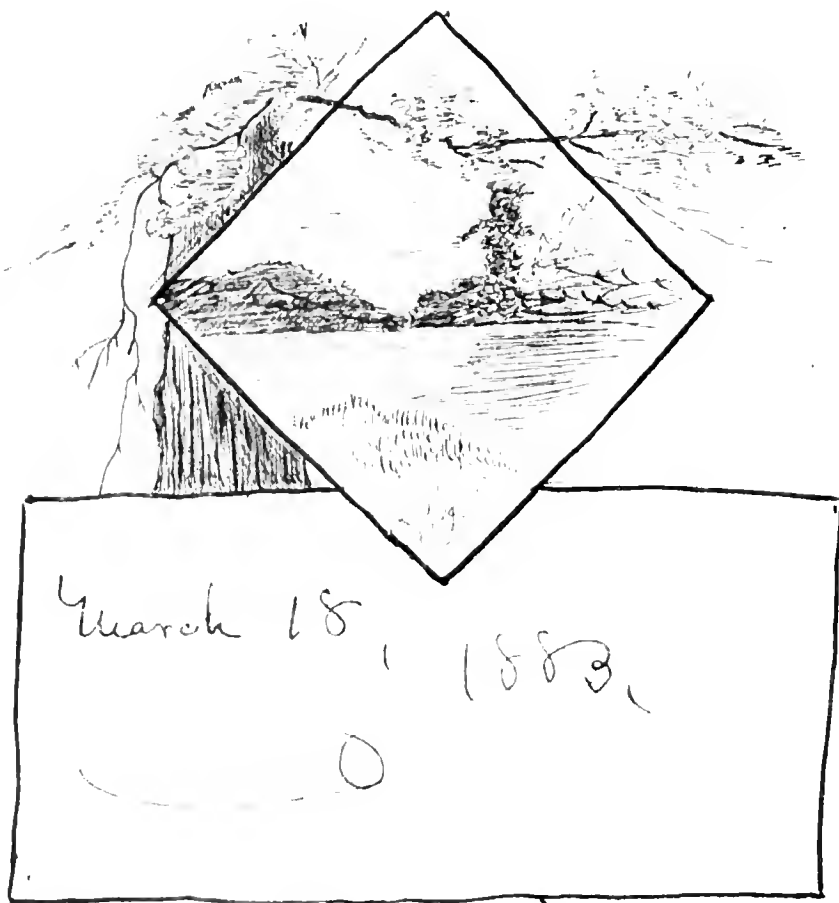
- 713 *Uergy truncata*, Say (1 or 2) rare here.  
 714 " *hildrethiana*, Lea. ( ) — Sept  
 715 *Anodonta grandis*, Say (10) Turkey Cr. pond. — May 21, 46, 46.  
 716 " *corpuscula*, Coop. (13) — river. see Aug. 13, 1882.  
 717 " *wardiana*, Lea. (dog) river — few.  
 718 " *formosacincta*, Lea (2.) Turkey & Perspective tracks. Aug. 13, '82.  
 719 " *imbicillis*, Say. (1) Sept. '82.  
 720. *Unio vermicosus*, Lea. (1) Hoffman locality. Aug. 18, 1882.

They are well packed in cotton, and out of the way for  
 a while. I also washed out my lot of *Unio*  
*parrus*, Bur.

This morn was lovely, but colder now. Had a  
 mind to go out a while, but hadn't time.

I do wish that GSW would write sometime.  
 He is the slowest thing I ever heard of.  
 If don't hear from him this week, I'll  
 prod him up again.





March 18, 1883,

My dear Sir,

March 19, Monday evg. -

Rec'd a card from Susan today.

We have not Fox, sent so long ago. Wrote to him tonight, & to Miss Hox, also, acknowledging receipt of the Calliostomas.

I'm trying to collect information about all the Terr. Ulae, published since the publication of W. B. Smith's "Terr. Ulae" in July, 1875, - or in fact in Jan. 1878, for the subject is brought up to that



data as my Bimby states in preface.

-Here is the list, so far. —

- 1 ~~1~~ x *Trio. copei*, A.S.W. - 1878. Beaumont, Texas.
- 2 x *H. circumcarinata*, Stearns, 1879. Cal.
- 3 *Macrocyclus henryi*, West. 1880. Olympia, Ore.
- 4 x *Zonites nuxali*, West. 1880. Roanoke, U.C.
- 5 " *andrewsi*, West. 1880. " " "
- 6 *Mesodon andrewsi*, West. 1880. " " "
- 7 *Zonites upsoni*, Calkins. 1880. (Dec.) Rockford, Ill.
- 8 *Patula bryanti*, Harper. 1881. U.C.
- 9 *Helicodiscus fimbriatus*, A.S.W. 1881
- 10 x *Poly. sampsoni*, A.S.W. 1881. Eureka Springs, Ark.
- 11 *Ariolimax becoxi*, A.S.W. 1880(?) Cal.
- 12 *Trio. levettei*, A.S.W. 1881 - Santa Fe, New Mexico.
- (13) *Angelita rowelli*, Newc. (See West. Zool. II, p. 20 & 206 - "Arionta")  
"4 miles south of Phoenix, Arizona," (Proc. Acad. Nat. Sci., 82)
- (13a) *Macroceramus pontificus*, not = *Kieneri*.

Mar. 21. 83. Wednesday eve.

(Am pulling up some)

Sh. for Sampson.

1 *Sph. striatum* (9) 40 or 20. } 40.317.

2 " *subcostum* (?) doz. }

3 *transversum*, (?) 40. - 40.206.

4 *Luc. virgata* var. 20 or 30. - 40.55.

5 *Staculca* doz. "

6 *Stupa mucron.* doz. "

7 *Pardalium* ? - 50 or 30.

Also wrote postal to

him. "warrant heard from

Wm. G. H. Paulson

"Thomson" about 10 to 12 miles

W. G. H. in yesterday's

some papers from Foster. - 50p.

March 23, '88. Friday Evg. —

Letter and small box from C. W. H. today.

He sends some sh., mostly marine, for identification. They are —  
(as he numbered them)

- 6  
6 21 1 *Unio complanatus*, Sol. juv. (?) Warwick, Kent Co., R. I. "Taken  
6 22 2 *Lamnicardium*? alive more than 20 years ago.  
6 23 (3) Har. Bay Warwick. "Sphaerium"  
6 24 3 *Massa strobilata*, Say, (3) Har. Bay, Warwick R. I.  
6 25 4 *U. complanatus* (2) 48 *Procinatus*, (4) L. & G. Str. N.Y. ("campanulatus")  
6 26 5 *Lucina dentata*, Wood. ("acuminata sh., loc. unknown).  
6 27 6 *Mosabiplex curvus*, Say Warwick. "light purple at first"  
6 28 7 *Stomatocrab* in *Massa strobilata*, L. I.  
6 29 8 *Mytilus* - (bluted) Roslyn.  
6 30 9 (*Modiola* *implicata*, Say. (?) Quereby Lake.  
6 31 10 *Mya arenaria*, Lin? (1 1/2 poor) Roslyn. L. I., N.Y.  
6 32 11  
6 33 12 *Lamnicardium*? ("I think a foreign sh.")  
6 34 13 *Columbella arara*, Say. (4)  
6 35 14 *Goniobasis nitella*, Lea. (?) - (6) "Tower shell," S. C.  
6 36  
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6 97  
6 98  
6 99  
6 100

to me. Elongated, acute, apex perfect, white &  
convex, with deep sutures. all my specimens  
are bleached perfectly white.



I am not at all certain about the  
identity of it with rubella, Lea.

March 25, Sunday aft. ---

Last night I brought home my rubber  
boots from office, intending to go on a little  
snail-hunt this morn. But when I awoke  
the ground was white with snow and the  
air was full of large moist flakes.

It is still snowing some (5 p.m.).

I've done little but got out a number  
of Linguals & jaws of M. profunda etc, from  
alcoholic specimens. Also picked over some  
shells, washed pupae, Anumcolas, etc.

1 Sunday evg. Mar. 25

In Polygyra I have about 15 species,

some; all principal groups. I have made drawings of P. 7-volva, cereolus, dorfilliana, & sampsoni, tonight on my Pl. III, New Series. In my former classification of this genus, Oct. 13<sup>th</sup>, 14, 1882, I divided "Dædalocheila" into two groups, characterized thus:—

a. Basal tooth marginal, Parietal tooth 3-angular, larger above.  
— anniculata &c. types.

a.a. Both lip teeth remote. Parietal tooth subquadrate, white, Apertures reniform. — dorfilliana, jacksoni &c. types.

Now on closer study, it appears that neither dorfilliana nor sampsoni have the basal tooth of peristome "remote". It is as truly marginal as in any of the anniculata section. But instead of removing them to that section on this account I would make a new diagnosis to include the same species ~~now~~ then written under "a.a."

This group may be divided into two sections very readily, as follows:—

1. Basal tooth at margin of peristome, <sup>external</sup> no scrobiculations marking position of upper tooth. — dorfilliana & sampsoni.
2. Both peristome teeth remote. an external scrobiculation, marking position of lip tooth above. — jacksoni & hazardi.



1st reg. finished apt. 20 1/2 rows  
the 1st of typical beds seen 54 figs.  
for the plate. " 22.5"

light snow was falling this morning when I  
went to work. Snowed till noon, then, melting  
off. Record from Jan given this morning,  
and then record, the first of the 21st snow.  
"

March 28

at 11 AM, the 1st of the snow  
which I noticed. It was a  
few minutes ~~at~~ 10 minutes.  
The snow was light, and  
the snow was at the 1st of the  
morning, in much the same way  
as the snow of the 21st.



Mar. 25 '66



100



104



101



102

*P. 72 volva, var.*  
*vox volvis, Pfr.*  
Fila.



105



103

*Poly. 72 volva, Say.*  
Fila.



108



109



106



107

*Poly. dorinilliana, Pfr.*  
Dorinilla, Texas.

*Poly. cereolus, Quakl.*  
Fila.



110



111



112

*Poly. sampsoni, Pfr.*  
Enzeka Springs,  
Ariz.



117



118

*sampsoni, Pfr.*

*jacksoni, Pfr.*



113



114



119



120

*clausenianus, Pfr.*

*sampsoni, Pfr.*



115



116



121



122



123



Both have much the same scrobiculate  
spine period. The peristome of  
Jacksoni is much thicker than, ~~being~~  
is white, like the peristome of  
white that - hazard is same color  
shell, brownish horn color.

The differences in armature of spine  
are shown in my plate III.

Conclusion

1. The Polypora -

These are very easily distinguished

by the markings on the surface

The for. is usually a

is a good deal of

the brown color, and

and the

is one of the other

for the

in respect to

the



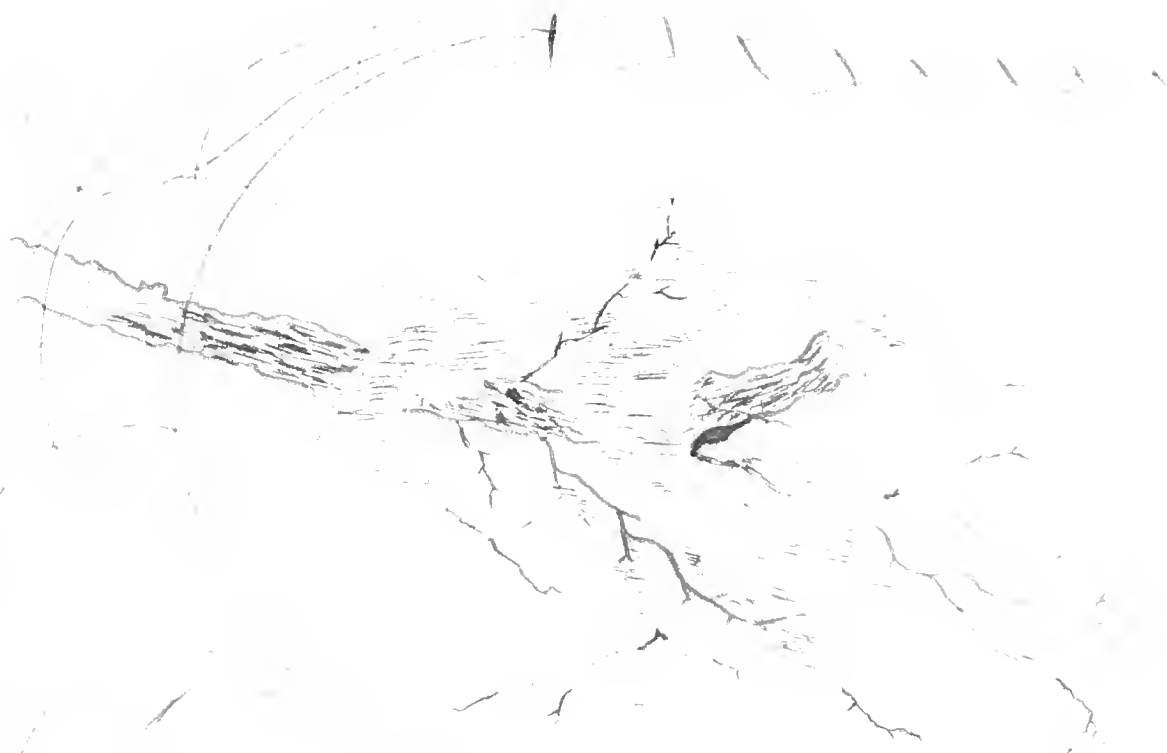
Y

Wm. W. W. W.

"The Gentleman" 1881

11. 11.

June 28, 1883. Eya



March 30, 1883. — Evg., Friday. —

Snow nearly all melted off. Rec'd  
Troy's "Structural & Systematic Couch."  
yesterday, but word from Troy I haven't  
heard from anyone for a month nearly.

Troy is good! I've found out a lot  
of things about Mr. Wells from  
it, among them the names of

my H. margata, Mr. — Trochomorphus.

For the shell I gave you a list  
of Rangia, at Paris.

11

12

your list of Rangia

your first essay on the

note the Rangia

note the Rangia

From the house, I donned rubber  
boots, and tramping paraphernalia,  
and with a supply of coll. bottles  
started for the "cut" and brick-  
yards. Very little out of the usual  
species occurred. *Stoculla* in small  
numbers. Some fine *Tricoma*, but all  
the *Merodon* found were broken.  
A few *Pupa* & *Tallonia* probably,  
these last all from "cut" ground  
nearby. And the northern slopes  
were covered with snow & ice  
yet. But it was quite warm on  
southern hill sides,

Apr. 11, 1902, 1800-2000 ft. 7:30 p.m.  
No light. A dark, cold, and dry day.  
The snow on the hill sides was  
very thin, and the ground was  
frozen. The temperature was  
about 20° F. at the top of the hill.

as the ... ..

... ..

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... ..

...

( ... .. ) al, ... ..

... .. have been from ... ..

... ..

... ..

... .. it is very imperfectly ... ..

... .. reflection of the "Cable ... .."

... .. 726, ( ... .. ) of the ... ..

... .. 338 species.

April 8th Sunday 229.

This morn was very cold and disagreeable  
but I started out for the 2000 locality  
at north end of Dubuque str. This is  
after all the best of all the localities.

visited. It differs from the  
work yard & "cut" localities in the  
great predominance of *Helices* *Peop.*  
*laetula*, *P. striatella*, *U. umbilicata*,  
*U. ora* & *obliqua*, *Pupa muscorum*, etc.  
*U. ora*, *U. L.*, *occultaria*, are the only  
shells found here. Of these *Peop.*, the *U. L.*

rs. See the "Cut" (See April 13, etc.)

Sac. ovata, oblique, 4-5, mult. Pet. ovate?

*Helicostichus* sp. in sea, rather common  
place, on the shore.

Fl. *Pineta* var. *red* ... *Acicola*,  
and *Acicola*.

1. *pa* ... *Acicola* ... *Acicola* ...  
*Acicola* ...

It is last many ... *Acicola*, which

I propose to call "*Acicola* ..."

1. *Acicola* ... *Acicola* ... and the

... *Acicola* ...

1. *Acicola* ... *Acicola* ...  
82. *Acicola* ...

*Acicola* ... *Acicola* ...  
*Acicola* ...

*Acicola* ... *Acicola* ...  
*Acicola* ...

It is also an exposure near *Acicola* ...  
*Acicola* ...

*Acicola* ... *Acicola* ...

*Acicola* ... *Acicola* ...

*Acicola* ... *Acicola* ...

*Acicola* ... *Acicola* ...

*Acicola* ... *Acicola* ...



It was now just over 100 ft. high. It cleared up and became quite pleasant and warm. I took boxes + went to the singular house Papa fellax place, and got a great lot of Papas. They were mostly crowded in groups of 2, 3, or 50 75 or more, and were covered by a blackish le'phay.

April 9 13. Monday 23

I received a letter from L. H. Underhill this noon. He is about to send me a box of skins.

There is a big exposure, with some on west side of river, opp. the station where road crosses down hill to town.

For fossils, I found it about Oct. 19, '82, but can't now find any more.

"

The fossils were discovered by me in a small house, as they were 2 or 3 years ago. I have

53. *Unio imphicala*, (1) ... 114.  
 54 *U. complanatus*, ? (1) ...  
 55 *U. —* ? (1/2) ...  


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 207 *U. ligamentum* ...  
 208 *rectus*.  
 209 *patulus*.  
 210 *plicatus*.  
 211 *mutator*.  
 212 *pressus*.  
 213 *elapso*.  
 214 *gibbus*.  
 215 *subignosus*.  
 216 *capax*.  
 217 *Unio*, (no. 208) ...  
 246 *U. uny*, ...  
 41 *tutentatus*.  
 42 *acutus*.  
 43 *crassidens*.  
 44 *brunneus*.  
 45 *multiradiatus*.  
 46 *multilobus*.  
 47 ...  
 48 *uniglobatus* - 211.  
 248 *U. undulatus* ...  
 280 *U. uny*, ...  
 281 *patulus*, ...  
 282 *uniglobatus*, ...  
 283 *dromas* ...  
 284 *unio*, ...  


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 292 *U.* ...  
 293 *ovatus* ...  


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 309 *U. porus* ...  
 310 *elegans*, ...  
 311 " ...  
 312 *zigzag* ...  
 313 " ...  
 314 *unigradus* ...  
 315 *uniglobus* ...  
 316 " ...

- 544 *U. uny*, ...  
 545 *inscatus* ...  
 546 *capax*, ...  
 547 *fractus*, ...  
 548 *formosus*, ...  
 549 *uniglobatus*, ...  
 550 *uniglobatus*, ...  
 551 *uniglobatus*, ...  
 552 *uniglobatus*, ...  
 553 *uniglobatus*, ...  
 554 *uniglobatus*, ...  
 555 *uniglobatus*, ...  
 556 *uniglobatus*, ...  
 557 *uniglobatus*, ...  
 558 *uniglobatus*, ...  
 559 *uniglobatus*, ...  


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 562 *U. blundensis*, ...  
 563 " ? ...  


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 582 *U. complanatus*, ...  
 583 *radiatus*, ...  
 584 *pressus*, ...  
 585 *uniglobatus*, ...  
 586 *uniglobatus*, ...

610 *Unio fragilis*, ...

- 645 *Styria corrugata*, ...  
 646 *subindus*, ...  
 647 *U. uny*, ...

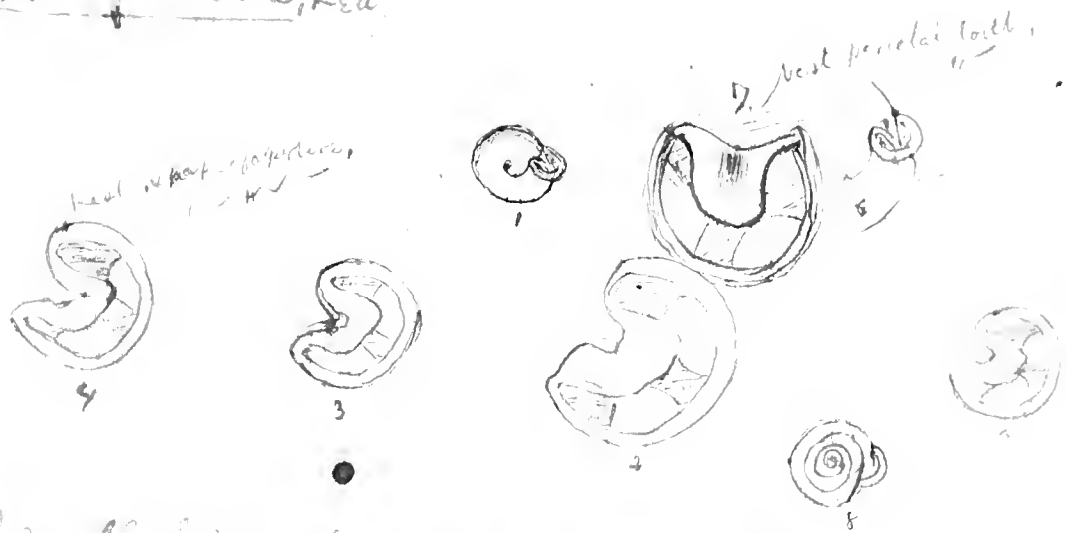


A. The second, third, fourth, fifth and sixth signs are  
negative; for the other 2 signs, namely, no  
bitter taste, etc.

170

Having taken the *P. x. guiliana*, Lea as the Type of this group, we will describe it first, & compare the other species with it.

1) *Polygyra dorquibiana*, Lea.



Shell small, depressed. aperture











A.

I.

B.

II.

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1. The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is of great importance and that it has not been completely solved. The author then proceeds to a detailed analysis of the problem.

2. In the second part of the paper, the author considers the case of a specific problem. It is shown that the problem can be solved by using the method of the first part. The author then gives a detailed description of the method and shows how it can be applied to the problem. The author also gives some numerical results and compares them with the results of other authors.

3. The third part of the paper is devoted to a discussion of the results. It is shown that the results are in good agreement with the results of other authors. The author then gives some conclusions and suggestions for further work.



5 Clauwa H.P.  
12 ~~multic.~~ " "

~~127 profunda~~ " "

~~127 alba~~ abs.

~~128 dillman~~ " "

~~129 pennsylvan.~~ " "

~~131 elevata~~ " "

~~131 mitchell~~ " "

~~132 major~~ " "

~~133 longi~~ " "

134 roseni, " "

~~135 diversa~~ " "

~~136 arva~~ " "

~~137 columba~~ " "

250 mes. carabalis B.D.C.

251 " " "

306 " mult. " B.D.C.

222 mes " ? red. rapids, H.P.

423 " " fossil, L.A. " "

566 albatris, N.Y. H.P.

613 roseni, Sampson,

~~614 exalta~~ " "

615 diversa " "

~~616 albatris alleni~~ " "

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24 entries, to 683.

16 species.

1894 - 1895

1894 - 1895

1894 - 1895

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0 Cl  
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August

Blue

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the same as for 185

